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ABSTRACT

The Nevada Criterion Referenced Tests (CRT) mandated by legislation are designed to provide a means of measuring student academic achievement and proficiency in the Nevada State Content and Performance Standards. This review guide is intended to be used by teachers and administrators as a tool to complement current efforts at preparing students for the state proficiency examinations or remedial efforts based in part on student test performance. The guide contains a sampling of representative items for the CRT, but it does not constitute a practice test and was not designed to provide drill activities. This document contains an introduction to the CRT reading assessments for grades 3 and 5 with sample test items and an introduction to the mathematics assessments for the same grades with representative test items. (SLD)

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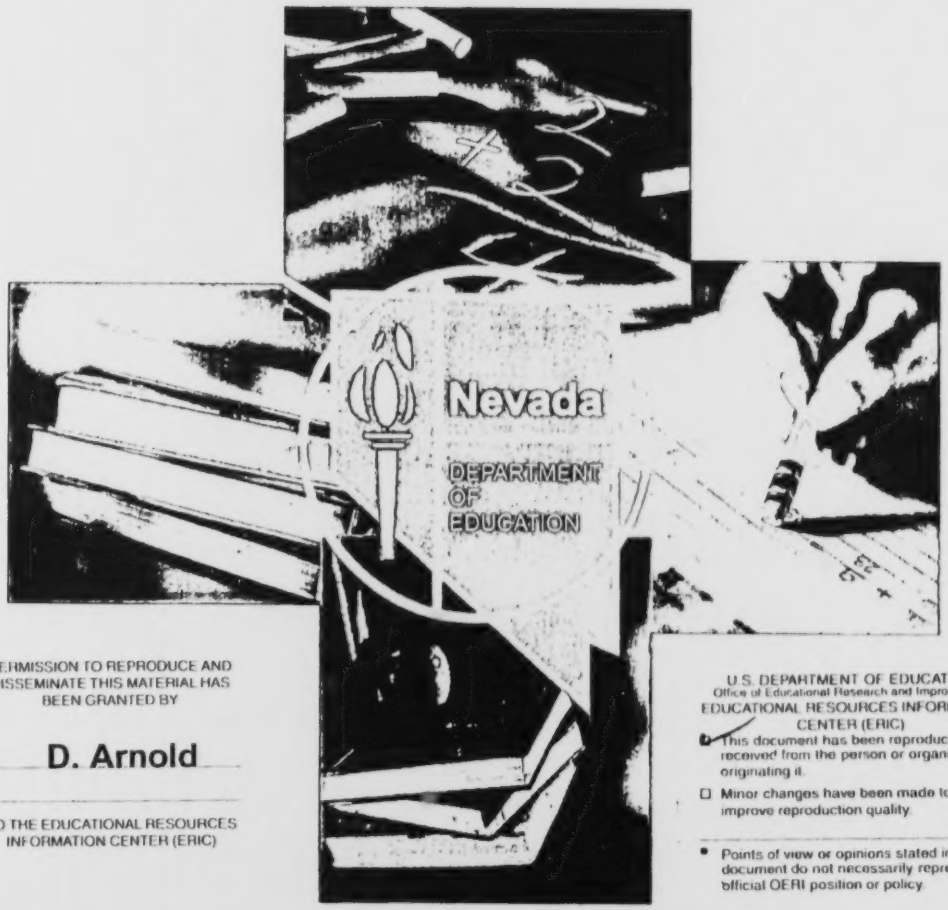
ED 479 500

Nevada

Criterion Referenced Tests
Grades 3 and 5
Review Guide



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Nevada Department of Education
Jack McLaughlin
Superintendent of Public Instruction

Office of Assessment, Program Accountability, and Curriculum
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Introduction

Purpose

The Criterion Referenced Tests (CRT), as mandated by legislation (Nevada Revised Statute 389.550), are designed to provide a means of measuring student academic achievement and proficiency in the Nevada State Content and Performance Standards. It is intended to help ensure that students are appropriately prepared in the curricula as set forth in the state standards. Unlike a norm-referenced test that is designed to compare an individual student, school, district, or state test score to an average score as determined by an entire test-taking population, the criterion-referenced test score is reported in terms of both group and individual student outcomes based on a pre-determined criterion of correct responses to measure proficiency and achievement levels.

This review guide is intended to be used by teachers, principals, and school districts as a supplemental tool—one that complements current efforts aimed at preparing students for the state proficiency examinations and/or remedial efforts based in part on student test performance. Each test includes only a portion of the curriculum content that students are expected to know. Although the guide provides a sampling of representative items for the CRT, the sample of items does not constitute a practice test and was not designed to provide "drill" activities.

Rationale and Philosophy

The Nevada comprehensive assessment system serves as an ongoing evaluative technique that allows monitoring of the extent to which students are acquiring necessary knowledge and skills. While necessary knowledge and skills may be characterized in multiple ways, they are primarily defined through the state content and performance standards that provide the basis of aligned curriculum and instructional practice.

Assessment can be viewed as multi-faceted. It can be considered as an objective monitoring tool that stands outside the triangle of standards, curriculum, and instruction. It can also be regarded as an integral aspect of curriculum and as an instructional tool. It may be that different assessment strategies can serve these multiple facets. If so, as is the case with standards, curricula, and instruction, multiple forms of assessment, including varied large-scale assessments and site-based assessments must be interlocked or aligned. As such, Nevada's assessment efforts are part of statewide systemic reform.

National Assessment of Educational Progress (NAEP)

Nevada is among the states that receive Title I funding and must therefore participate in state NAEP norm-referenced assessments in reading and mathematics at grades 4 and 8. A sample of Nevada students will be tested through the National Assessment of Educational Progress program in reading annually each spring from years 2002 to 2010 and in mathematics from

2003 to 2010. In addition, the NAEP science assessment will be given in years 2004 and 2008 and the writing assessment will be given in years 2002, 2006, and 2010. Information on these assessments may be obtained at http://nces.ed.gov/nationsreportcard/.

Norm-Referenced Assessment

The norm-referenced assessments, as described in Nevada Revised Statute 389.015, are administered annually each fall to every Nevada student in grades 4, 8, and 10 with the exception of school year 2002-2003, when 7th grade replaces 8th grade testing. Subjects tested include reading/language arts, mathematics, and science. The current testing contractor is Riverside Publishing Company and they are responsible for the distribution and scoring of the Iowa Tests of Basic Skills in grades 4 and 7/8 http://www.riverpub.com/products/group/itbs_a/home.html and the Iowa Tests of Educational Development in grade 10 (http://www.riverpub.com/products/group/ited_a/home.html).

Criterion-Referenced Assessment

The Nevada CRT program was initially mandated in 1999 and piloted in the 2000-2001 school year in mathematics and reading in the 3rd and 5th grades. The 5th grade science test and the 8th grade mathematics, reading, and science tests will be field tested in the 2002-2003 school year. The test items are developed by Nevada teachers with the assistance of the Nevada Department of Education, Harcourt Educational Measurement Company, and the WestEd Regional Educational Laboratory. The test items undergo a thorough review for alignment with Nevada Standards and for possible bias. Students are tested in the spring within the testing window of two weeks of the 165th day of instruction. Each test takes approximately 120 minutes and contains between 45 and 70 items.

Since each form of assessment taken individually may serve a narrower purpose, each assessment in the Nevada Proficiency Examination Program must be considered in conjunction with all other forms of assessment. This conceptualization is consistent with the adage that the whole is greater than the sum of its parts. Each form of assessment provides useful bits of information, but the interpretation of student and school achievement is better informed by looking at the influence of multiple measures. (See Figures 1 and 2.)

Figure 1 — A Complementary System Of State, Local, And Building Level Assessment Practices

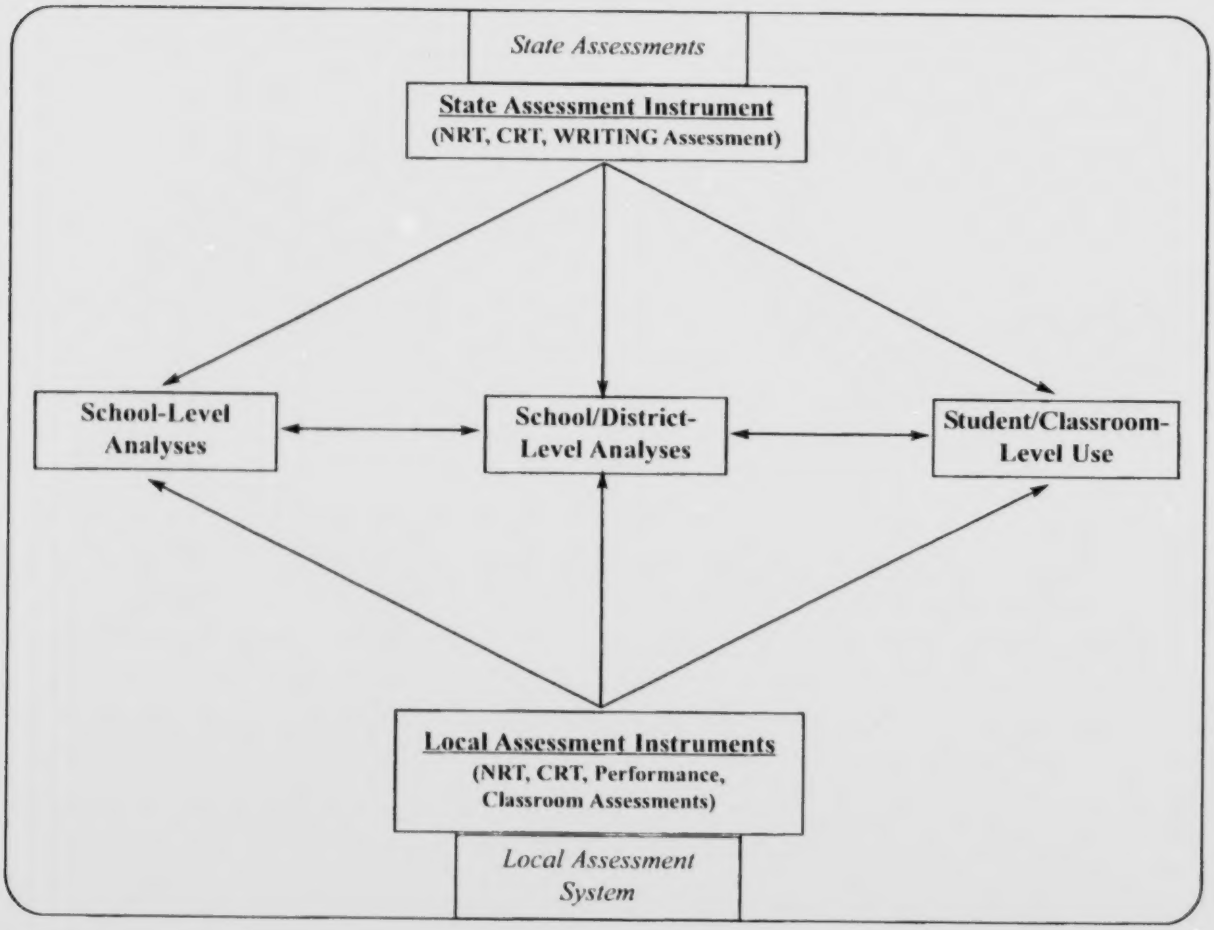
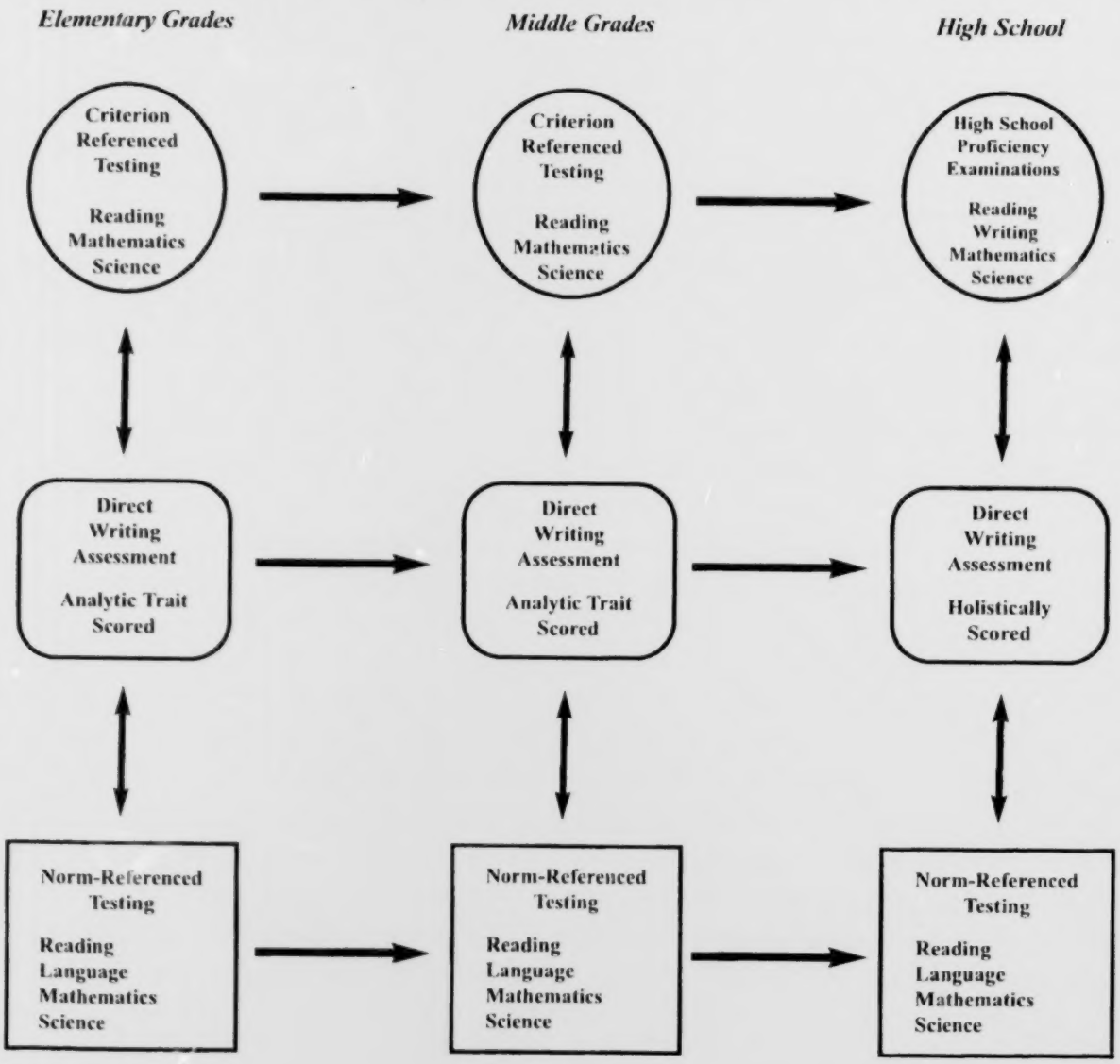


Figure 2 — State-Level Assessment Flow



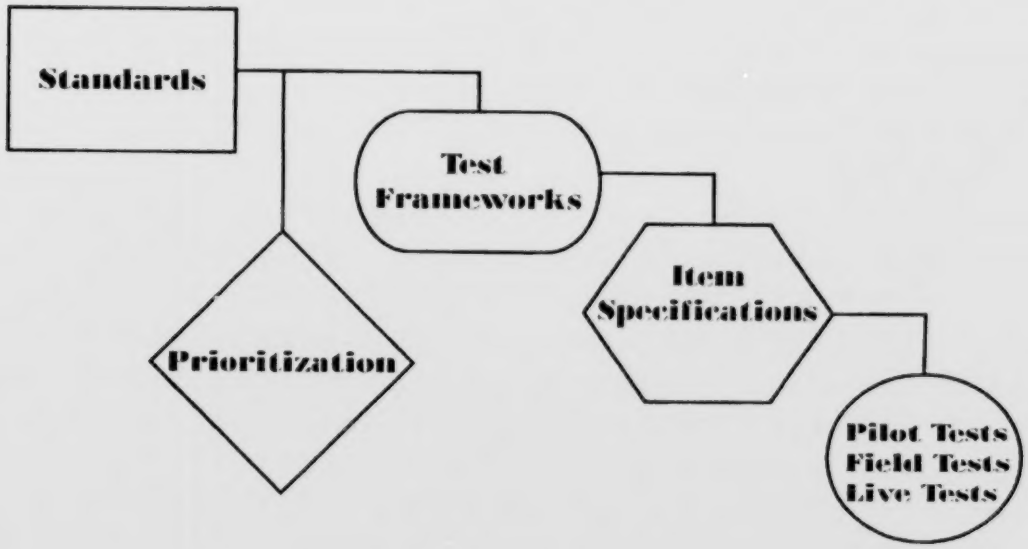
Accountability and Alignment

Current reform initiatives, most recently the federal *No Child Left Behind Act*, are built on the notion of "results-based" accountability. Stated simply, students are responsible for learning standards-based content knowledge and skills, and educators are responsible for providing students with the opportunity to learn and demonstrate that knowledge and those skills.

This much is known about accountability systems and the role of assessments: When the stakes are high, whether applied to students or to schools, the assessments drive classroom instruction and/or behavior and there is motivation to perform well on the accountability measures. Directing instructional change can be desirable and is arguably the goal or role of accountability. How assessments affect instruction or curriculum is a key concern and leads to the issue of alignment between standards and assessments. Unless this alignment is clear, the results of accountability cannot be reliable.

For the assessments and the accountability system to support the overall goals of improving student learning and school improvement, the assessments must measure the standards. Unfortunately, the language of "standards" is not always easily applied to assessment or measurement. Work must be done to translate the standards into a form that is conducive to assessment, yet does not compromise academic expectations. This can be achieved in multiple ways and has been accomplished in Nevada using the following method (See Figure 3.).

Figure 3 — Translation is One Step in the Alignment



The articulation of standards into a form appropriate for school- and classroom-level assessments is needed for a variety of reasons. First of all, it provides a clear plan for developing test items and tasks. This gives some assurance that, at the state level, measurements are aligned with expected proficiency of student performance based on the state standards. In addition, it supports the development of school district or classroom assessments that are aligned to both the state academic expectations and other forms of assessment that comprise the total assessment system. Aligning different types of assessments is required to achieve systemic reform.

The articulation of standards, ultimately in the form of assessment, also helps serve another critical purpose. It communicates what is expected from students in the form of knowledge and skills acquisition as well as what is expected from schools in terms of curriculum and instructional delivery. In addition, students, parents, and teachers must know how students will be assessed and the decisions that will be made based on their performance.

One of the critical features of the interpretation of standards in Nevada has been the prioritization of standards. After the standards were written and adopted, a statewide committee of district-nominated educators were brought together to make decisions regarding the assessment of the standards. Groups of teachers and other educators had the task of taking each standard and objective and noting whether it was indicative of being ***enduring*** (i.e., essential knowledge and skills students need to internalize and retain), ***important*** (i.e., knowledge and skills students need to expand their understanding, make connections, and comprehend new or unfamiliar information), or ***worthwhile*** (i.e., students should be familiar with key concepts, ideas, facts, and terms). Next, educators made decisions as to whether a standard/objective might best be assessed at the state or local level. This process resulted in a clear subset of standards and objectives that were denoted as being enduring or important as well as testable at the state level.

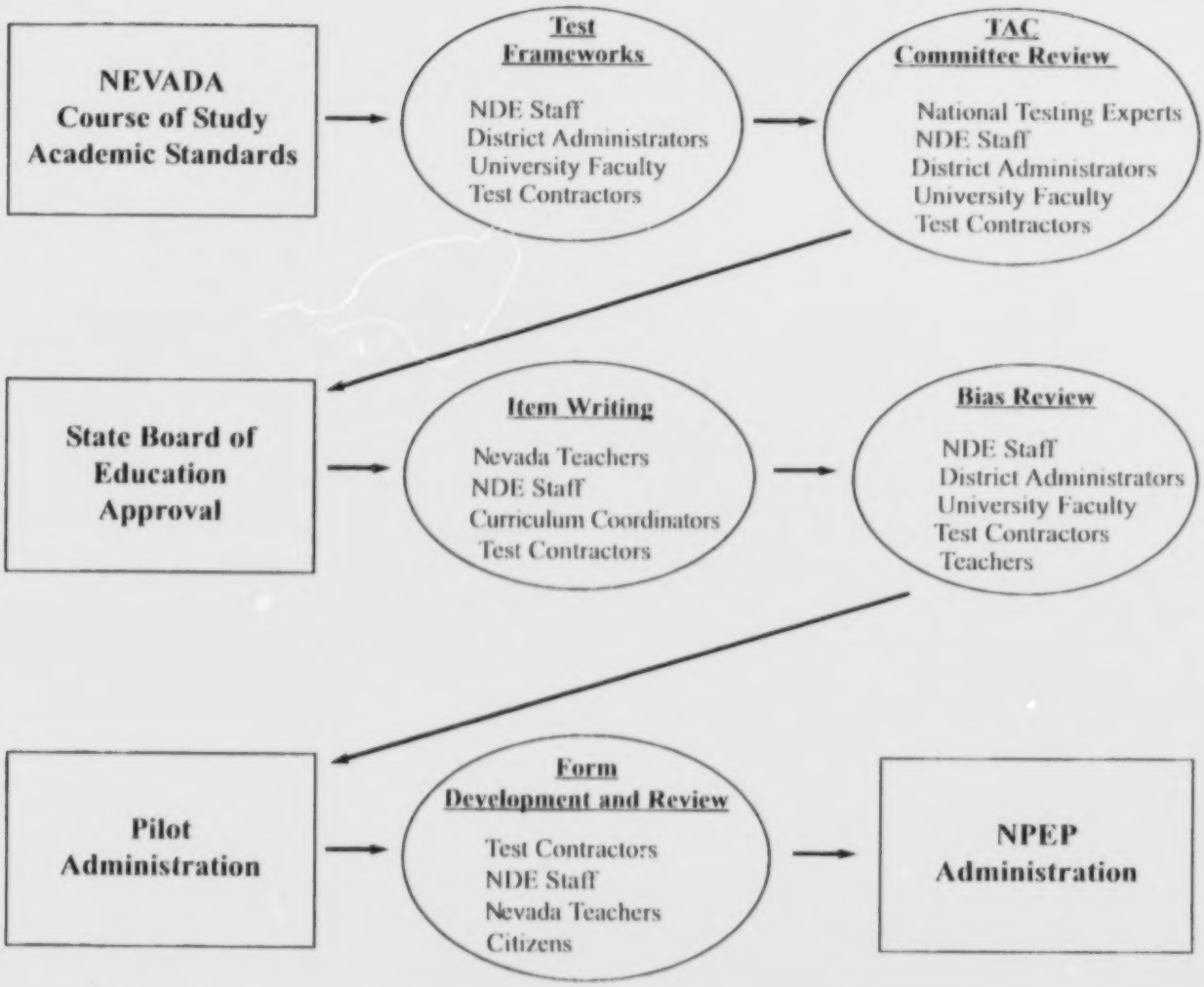
The prioritization process is important for several reasons. First, the breadth and depth of the Nevada Content Standards make it very difficult to provide a comprehensive assessment. Second, although a lengthy assessment process might be seen as optimal, cost and time spent testing are practical constraints. Third, the prioritization process allows for a finer distinction in those aspects of the standards that are critical for state assessment. This, of course, is a critical undertaking. As stated previously, testing will direct curriculum and instruction, and any narrowing of curricular scope could be detrimental to covering all the standards. It is important to note that the prioritization process did not exclude any of the standards/objectives from assessment. Instead, it called for the assessment of all standards/objectives at the local level, and a specified set of knowledge/skills to be assessed at the state level.

Development

The cornerstone of the test development process of the Nevada Proficiency Examination Program is teacher involvement in the writing and reviewing of test items. This test-building process for state assessments is comprehensive and involves national and local educators, as well as technical assistance from regional education laboratories and testing contractors. Prior to writing items, teachers are provided thorough training designed to assist them in writing quality items that are free from bias and clearly aligned to specific prioritized content standards. Throughout item writing sessions, time is dedicated to peer-review of item drafts, which includes validating the matched items to specific content skills.

Figure 4 illustrates the development process for test items. It begins with the state standards and the construction of test frameworks and specifications for them, followed by a review of these documents by a Technical Advisory Committee (TAC) and policy boards. After approval from the Nevada Board of Education, educators who have been nominated by district administrators from around the state begin the item writing process, which includes the construction of items/tasks and the qualitative bias review of test items/tasks and reading passages. Items are analyzed to ensure they do not convey insensitivity to a particular group, violate privacy issues, or differentially impact opportunity and access. A variety of educators and other citizens are involved in the review process with the goal of building a culturally diverse team that is representative of the state population, with teachers always serving in this primary role. Reliance on teacher involvement in the writing and review process provides confidence that the state assessments accurately measure content being taught in Nevada classrooms. Once written and reviewed, items are field tested with Nevada students. Based on a statistical and qualitative review of the field-tested items, test forms are constructed, submitted for a comprehensive review, and ultimately formally administered to students.

Figure 4 — The NPEP Development Process



Reporting

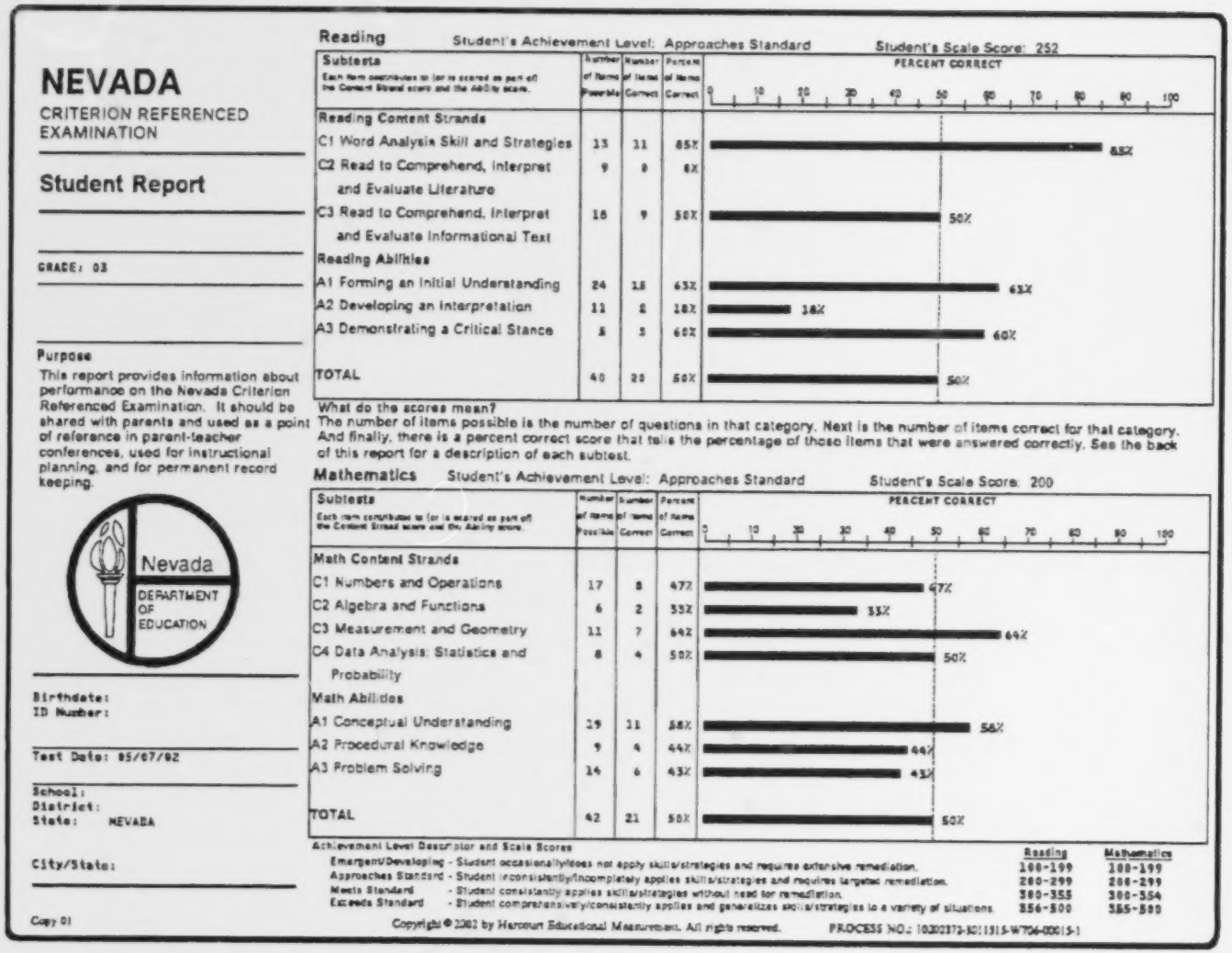
In order for assessments to serve the purposes of improving student learning and classroom instruction, assessment results must be reported in a manner that facilitates the interpretation of student performance. The reporting of results must be tied directly to the expectations for student learning.

The state provides a variety of score reports in paper format, including summary reports for student, school, district, and state levels. Additionally, "raw" data is provided to school districts in electronic format to allow for more precise analyses. The integration of results from the multiple levels of assessment (i.e., state vs. classroom) requires the use of electronic media. The state is currently pursuing the adoption of web-based reporting software that can make the "raw" data available in varying degrees of specificity to all education stakeholders. In particular, teachers would be able to access data representing their own classroom, school, and/or district.

Although the electronic transfer of results is optimal, the paper reports disseminated by the state still convey important information with clarity. The student-level summary report conveys both diagnostic and general achievement information (See Figures 5a–5d.). It provides information pertaining to the number of items possible, the number or items correct, and the percentage of items answered correctly relative to a particular content standard (i.e., in Reading – Read to Comprehend, Interpret and Evaluate Literature, or in Math – Algebra and Functions). In addition, it provides information on the cognitive domain (i.e., in Reading – Developing an Interpretation or in Math – Procedural Knowledge). The scale score obtained by the student is also specified as well as whether or not the obtained score is indicative of passing or failing.

The number/percentage correct information has limited diagnostic value. For a particular administration, it does indicate performance relative to the more specified content areas; but the limited number of questions related to any particular standard or domain, in addition to the number of skills encompassed within the standard, prevents a highly reliable estimate of performance. However, if this information is combined with classroom-based information, a strong diagnostic picture can be created. For example, if a student correctly answers 5 of 10 items pertaining to Numbers and Number Sense on the state test, it would suggest some relative weakness. However, because each test form is but a sampling of content from the standards, it is important to validate the state-level performance information with classroom-level information relative to Numbers and Number Sense (assignment grades, class quizzes, teacher observation, etc.) before major remedial efforts would be implemented for this student.

Figure 5a — Student-Level Summary Score Report
Grade 3 (Front)



NEVADA
CRITERION REFERENCED EXAMINATION

Student Report

GRADE: 03

Purpose
This report provides information about performance on the Nevada Criterion Referenced Examination. It should be shared with parents and used as a point of reference in parent-teacher conferences, used for instructional planning, and for permanent record keeping.

Nevada DEPARTMENT OF EDUCATION

Birthdate:
ID Number:

Test Date: 05/07/02

School:
District:
State: NEVADA

City/State:

Copy 01

Reading Student's Achievement Level: Approaches Standard Student's Scale Score: 252

Subtests (Each item contributes to (or is scored as part of) the Content Strand score and the Ability score.)	Number of Items Possible	Number of Items Correct	Percent of Items Correct
Reading Content Strands			
C1 Word Analysis Skill and Strategies	13	11	85%
C2 Read to Comprehend, Interpret and Evaluate Literature	9	0	0%
C3 Read to Comprehend, Interpret and Evaluate Informational Text	18	9	50%
Reading Abilities			
A1 Forming an Initial Understanding	24	15	63%
A2 Developing an Interpretation	11	2	18%
A3 Demonstrating a Critical Stance	5	3	60%
TOTAL	40	20	50%

PERCENT CORRECT: 0 10 20 30 40 50 60 70 80 90 100

What do the scores mean?
The number of items possible is the number of questions in that category. Next is the number of items correct for that category. And finally, there is a percent correct score that tells the percentage of those items that were answered correctly. See the back of this report for a description of each subtest.

Mathematics Student's Achievement Level: Approaches Standard Student's Scale Score: 200

Subtests (Each item contributes to (or is scored as part of) the Content Strand score and the Ability score.)	Number of Items Possible	Number of Items Correct	Percent of Items Correct
Math Content Strands			
C1 Numbers and Operations	17	8	47%
C2 Algebra and Functions	6	2	33%
C3 Measurement and Geometry	11	7	64%
C4 Data Analysis: Statistics and Probability	8	4	50%
Math Abilities			
A1 Conceptual Understanding	19	11	58%
A2 Procedural Knowledge	9	4	44%
A3 Problem Solving	14	6	43%
TOTAL	42	21	50%

PERCENT CORRECT: 0 10 20 30 40 50 60 70 80 90 100

Achievement Level Descriptor and Scale Scores

		Reading	Mathematics
Emergent/Developing	- Student occasionally/does not apply skills/strategies and requires extensive remediation.	100-199	100-199
Approaches Standard	- Student inconsistently/incompletely applies skills/strategies and requires targeted remediation.	200-299	200-299
Meets Standard	- Student consistently applies skills/strategies without need for remediation.	300-355	300-354
Exceeds Standard	- Student comprehensively/consistently applies and generalizes skills/strategies to a variety of situations.	356-500	355-500

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Figure 5b — Student-Level Summary Score Report
Grade 3 (Back)

READING

Additional information about the Nevada content areas can be viewed at the Nevada Department of Education website, www.nde.state.nv.us. The Nevada Criterion-Referenced Examination in Reading contains passage selections with a variety of questions ranging in difficulty which test how well a student can perform reading activities based on:

READING CONTENT STRANDS

Word Analysis Skill and Strategies (C1)
- Use knowledge of phonics and structural elements to read and determine the meaning of unfamiliar words in context.
- Use knowledge of prefixes, suffixes, roots, or base words to determine the meaning of words in context.
- Identify and use knowledge of diphthongs when reading; determine the meanings and other features of unknown words using dictionaries and glossaries.
- Identify and use knowledge of synonyms, homophones, and homographs to expand vocabulary and understand text.

Read to Comprehend, Interpret and Evaluate Literature (C2)
- Restate facts and details in text to share information and organize ideas.
- Make inferences about setting and character traits; make predictions about plot; check text for verification.
- Identify and compare themes or messages in reading selections.

Read to Comprehend, Interpret and Evaluate Informational Text (C3)
- Restate facts and details in text to share information and organize ideas.
- Distinguish essential information from titles, tables of contents, chapter headings, glossaries, indexes, diagrams, charts, and maps to locate information in texts for specific purposes.
- Distinguish between cause and effect, fact and opinion, and main ideas and supporting details in texts.
- Draw conclusions about text and support them with textual evidence and experience.

READING ABILITIES

Forming an Initial Understanding (A1)
- Assesses the initial understanding of what is read ("reading the lines").

Developing an Interpretation (A2)
- Assesses a more complete understanding of what is read ("reading between the lines").

Demonstrating a Critical Stance (A3)
- Assesses the evaluation and consideration of what is read ("reading beyond the lines").

MATHEMATICS

Additional information about the Nevada content areas can be viewed at the Nevada Department of Education website, www.nde.state.nv.us. The Nevada Criterion-Referenced Examination in Mathematics will contain items that test how well a student can perform the following mathematical activities:

MATHEMATICS CONTENT STRANDS

Numbers and Operations (C1)
- Immediately recall and use addition, subtraction, and multiplication facts to 81.
- Add and subtract multi-digit numbers with regrouping.
- Generate and solve 2-step addition and subtraction and 1-step multiplication problems based on practical situations using pencil and paper, mental computation, and estimation.
- Add and subtract decimals using money as a model.
- Use, model, and identify place value positions up to 10,000.
- Model, sketch, and label fractions with denominators to 10; write fractions with numbers and words.

Algebra and Functions (C2)
- Recognize, describe, and create patterns using numbers; use number patterns and their extensions to solve problems.
- Identify missing terms and missing numbers in open number sentences involving number facts in addition and subtraction.
- Complete number sentences with the appropriate words and symbols for addition, subtraction, less than, greater than, and equal to (+, -, <, >, =).

Measurement and Geometry (C3)
- Select and use appropriate units of measurement; measure to a required degree of accuracy; and record results.
- Read, write, and use money notation determining possible combinations of coins and bills to equal given amounts.
- Tell time to the nearest minute, using analog and digital clocks, and identify elapsed time.
- Describe, sketch, compare, and contrast plane geometric figures.

Data Analysis: Statistics and Probability (C4)
- Collect, organize, display, and describe simple data using number lines, pictographs, bar graphs, and frequency tables.
- Use concepts of probability (e.g., impossible, likely, certain) to make predictions about future events.

MATHEMATICS ABILITIES

Conceptual Understanding (A1)
- Label, define, and compare/contrast concepts and translate from one mode of representation to another.
- Recognize and identify properties of a given concept, and use models, diagrams, and symbols to represent it.

Procedural Knowledge (A2)
- Recognize when a procedure is appropriate, give reasons for steps in a procedure, and accurately execute procedures in a problem situation.
- Verify the results of procedures using analysis and/or models.
- Identify and/or demonstrate the appropriate use of tools (calculators, protractors, rulers, etc.).

Problem Solving (A3)
- Analyze situations to determine common properties and structures, recognize patterns, and form conjectures.
- Apply a variety of combinations of strategies to solve problems.
- Verify conclusions, judge the validity of conjectures, and construct valid arguments.

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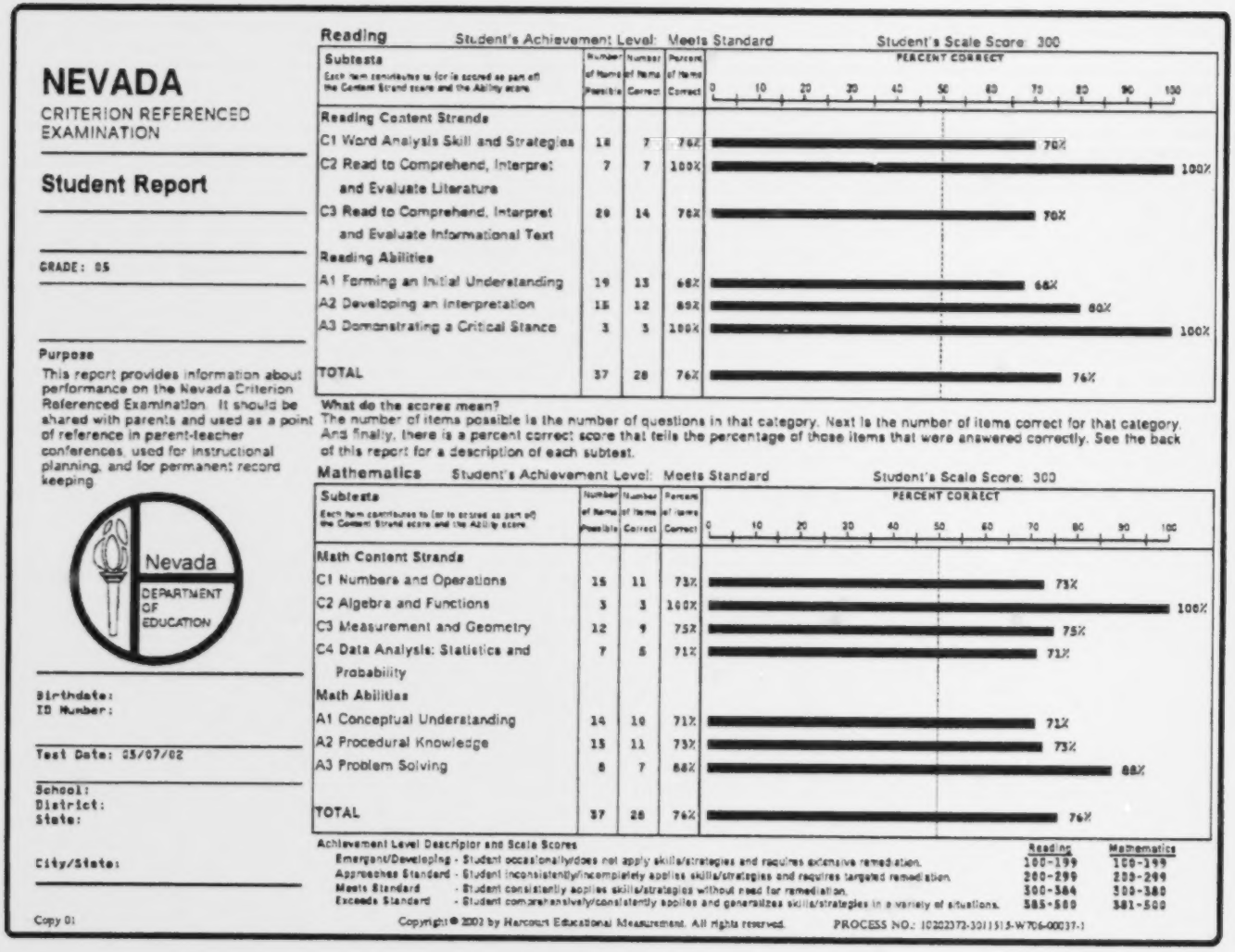
Figure 5c — Student-Level Summary Score Report
Grade 5 (Front)



NEVADA
CRITERION REFERENCED EXAMINATION

Student Report

GRADE: 05

Purpose
This report provides information about performance on the Nevada Criterion Referenced Examination. It should be shared with parents and used as a point of reference in parent-teacher conferences, used for instructional planning, and for permanent record keeping.

Nevada DEPARTMENT OF EDUCATION

Birthdate:
ID Number:

Test Date: 05/07/02

School:
District:
State:

City/State:

Copy 01

Reading Student's Achievement Level: Meets Standard Student's Scale Score: 300

Subtests (Each item contributes to (or is scored as part of) the Content Strand score and the Ability score)	Number of Items Possible	Number of Items Correct	Percent of Items Correct
Reading Content Strands			
C1 Word Analysis Skill and Strategies	10	7	70%
C2 Read to Comprehend, Interpret and Evaluate Literature	7	7	100%
C3 Read to Comprehend, Interpret and Evaluate Informational Text	20	14	70%
Reading Abilities			
A1 Forming an Initial Understanding	19	13	68%
A2 Developing an Interpretation	15	12	80%
A3 Demonstrating a Critical Stance	3	3	100%
TOTAL	37	28	76%

PERCENT CORRECT: 0 10 20 30 40 50 60 70 80 90 100

What do the scores mean?
The number of items possible is the number of questions in that category. Next is the number of items correct for that category. And finally, there is a percent correct score that tells the percentage of those items that were answered correctly. See the back of this report for a description of each subtest.

Mathematics Student's Achievement Level: Meets Standard Student's Scale Score: 300

Subtests (Each item contributes to (or is scored as part of) the Content Strand score and the Ability score)	Number of Items Possible	Number of Items Correct	Percent of Items Correct
Math Content Strands			
C1 Numbers and Operations	15	11	73%
C2 Algebra and Functions	3	3	100%
C3 Measurement and Geometry	12	9	75%
C4 Data Analysis: Statistics and Probability	7	5	71%
Math Abilities			
A1 Conceptual Understanding	14	10	71%
A2 Procedural Knowledge	15	11	73%
A3 Problem Solving	8	7	88%
TOTAL	37	28	76%

PERCENT CORRECT: 0 10 20 30 40 50 60 70 80 90 100

Achievement Level Descriptor and Scale Scores

	Reading	Mathematics
Emergent/Developing - Student occasionally does not apply skills/strategies and requires extensive remediation.	100-199	100-199
Approaches Standard - Student inconsistently/incompletely applies skills/strategies and requires targeted remediation.	200-299	200-299
Meets Standard - Student consistently applies skills/strategies without need for remediation.	300-384	300-380
Exceeds Standard - Student comprehensively/consistently applies and generalizes skills/strategies in a variety of situations.	385-500	381-500

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Figure 5d — Student-Level Summary Score Report
Grade 5 (Back)

READING

Additional information about the Nevada content areas can be viewed at the Nevada Department of Education website, www.nde.state.nv.us. The Nevada Criterion-Referenced Examination in Reading contains passage selections with a variety of questions ranging in difficulty which test how well a student can perform reading activities based on:

READING CONTENT STRANDS

Word Analysis Skill and Strategies (C1)
- Use knowledge of phonics, structural elements, grammar, and syntax to read and to determine the meaning of unfamiliar words in context.
- Identify and use the meanings of high frequency Greek-and Latin-derived roots and affixes to determine the meaning of words.
- Find word origins and determine meanings of unknown words using dictionaries and glossaries.
- Use context clues such as restatement, definitions, and examples to determine the meaning of unknown words.

Read to Comprehend, Interpret and Evaluate Literature (C2)
- Select and use a variety of skills and strategies during reading such as identifying fact and opinion or cause and effect, verifying predictions, summarizing, paraphrasing, drawing conclusion to aid in comprehension.
- Distinguish the main incidents of a plot that lead to the climax, and explain how the problem or conflict is resolved.
- Make inferences supported by the text about character traits and motivations, and make predictions about conflicts and resolutions.
- Compare stated and implied themes in a variety of works.
- Locate and interpret figurative language, including simile, metaphor, and personification in text.

Read to Comprehend, Interpret and Evaluate Informational Text (C3)
- Select and use a variety of skills and strategies during reading such as identifying fact and opinion or cause and effect, verifying predictions, summarizing, paraphrasing, drawing conclusion to aid in comprehension.
- Use knowledge of format, graphics, sequence, diagrams, illustrations, charts, and maps to comprehend text.
- Draw conclusions from and make inferences about text supported by textual evidence and experience.
- Identify authors' ideas and purposes in texts, including advertisements and public documents.

READING ABILITIES

Forming an Initial Understanding (A1)
- Assesses the initial understanding of what is read ("reading the lines").

Developing an Interpretation (A2)
- Assesses a more complete understanding of what is read ("reading between the lines").

Demonstrating a Critical Stance (A3)
- Assesses the evaluation and consideration of what is read ("reading beyond the lines").

MATHEMATICS

Additional information about the Nevada content areas can be viewed at the Nevada Department of Education website, www.nde.state.nv.us. The Nevada Criterion-Referenced Examination in Mathematics will contain items that test how well a student can perform the following mathematical activities:

MATHEMATICS CONTENT STRANDS

Numbers and Operations (C1)
- Use and apply multiplication and corresponding division facts through 12's.
- Generate and solve addition, subtraction, multiplication, and division problems using whole numbers in practical situations.
- Use order of operations to solve problems.
- Multiply and divide multi-digit numbers by 2-digit numbers, including strategies for powers of 10.
- Use and identify place value.
- Use models and drawings to identify, compare, add, and subtract fractions with like denominators and to add and subtract decimals; use both to solve problems.

Algebra and Functions (C2)
- Using whole numbers as a replacement set, find possible solutions to such inequalities as $8 + 4 > n$.
- Use variables in open sentences and to describe simple functions and relationships.
- Generate number sequences given the first term and any basic computation rule (e.g., given a 4 and the rule of add 6, 10, 16, 22, 28, ...).

Measurement and Geometry (C3)
- Estimate measures of length, volume, capacity, quantity, and weight, communicating degree of accuracy needed and when a more precise measure is required.
- Determine totals and change due for monetary amounts in problem-solving situations.
- Communicate the difference between perimeter and area.
- Identify equivalent periods of time, including relationships between and among seconds, minutes,hours, days, months, and years (e.g., 60 sec = 1 min).
- Draw and classify triangles, according to their properties; (e.g., right, scalene, obtuse, equilateral); identify and draw circles and parts of circles, describing the relationships between the various parts (e.g., central angle, arc, diameter).
- Identify shapes that have congruence, similarity, and/or symmetry of figures using a variety of methods including transformational motions (e.g., translations/slide, rotation/turn, reflection/flip, enlargement/reduction) and models, drawings, and measurement tools.
- Using a grid, identify coordinates for a given point or locate points of given coordinates in the first quadrant.
- Identify, describe, compare, and classify two- and three-dimensional figures by relevant properties including number of vertices (corners), edges, and shapes of faces; identify and predict the effects of combining, dividing, and changing shapes into other shapes.
- Identify, describe, define, and draw geometric figures including points, intersecting, perpendicular and parallel lines, line segments, rays, angles, and planes.

Data Analysis: Statistics and Probability (C4)
- Collect, organize, read, and interpret data using a variety of graphic representations including tables, line plots, stem and leaf plots, scatter plots, histograms; use data to draw and explain conclusions and predictions.
- Model and then compute measures of central tendency including mean, median, and mode.

MATHEMATICS ABILITIES

Conceptual Understanding (A1)
- Label, define, and compare/contrast concepts and translate from one mode of representation to another.
- Recognize and identify properties of a given concept, and use models, diagrams, and symbols to represent it.

Procedural Knowledge (A2)
- Recognize when a procedure is appropriate, give reasons for steps in a procedure, and accurately execute procedures in a problem situation.
- Verify the results of procedures using analysis and/or models.
- Identify and/or demonstrate the appropriate use of tools (calculators, protractors, rulers, etc.).

Problem Solving (A3)
- Analyze situations to determine common properties and structures, recognize patterns, and form conjectures.
- Apply a variety of combinations of strategies to solve problems.
- Verify conclusions, judge the validity of conjectures, and construct valid arguments.

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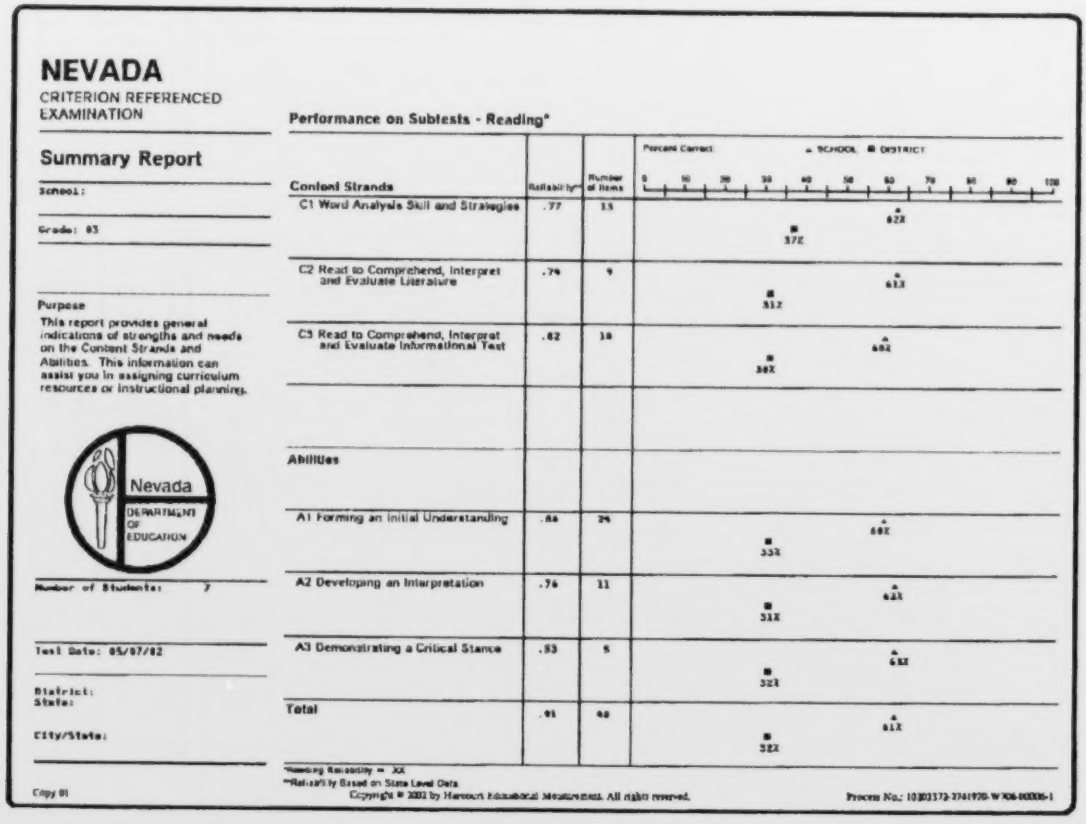
The school summary report (See Figures 6a–6d.) conveys similar information. The report conveys raw performance in terms of the school's average percent correct relative to each content standard and cognitive domain. Next to the "Number of Items" is the "Reliability Indicator" that refers to the extent to which test scores on items are consistent based on statistical analyses. The report provides a standard-by-standard, domain-by-domain comparison between the school and the school district. Additionally, it provides a bar chart denoting a comparison between the school and the district in terms of pass rates.

The report also provides disaggregated data on student performance by major subpopulations. This includes average scale score performances as well as pass rates by gender, major ethnic groups, students with disabilities, students with limited English proficiency, and students with low socio-economic status.

Figure 6a — School-Level Summary Score Report – Reading Grade 3



NEVADA

CRITERION REFERENCED EXAMINATION

Summary Report

School:

Grade: 03

Purpose

This report provides general indications of strengths and needs on the Content Strands and Abilities. This information can assist you in assigning curriculum resources or instructional planning.

Nevada DEPARTMENT OF EDUCATION

Number of Students: 7

Test Date: 05/07/02

District:
State:

City/State:

Copy 01

Performance on Subtests - Reading*

Content Strands	Reliability**	Number of Items	Percent Correct ▲ SCHOOL ■ DISTRICT
C1 Word Analysis Skill and Strategies	.77	13	▲ 62% ■ 37%
C2 Read to Comprehend, Interpret and Evaluate Literature	.74	9	▲ 63% ■ 51%
C3 Read to Comprehend, Interpret and Evaluate Informational Text	.82	10	▲ 60% ■ 36%
Abilities			
A1 Forming an Initial Understanding	.86	24	▲ 60% ■ 35%
A2 Developing an Interpretation	.76	11	▲ 62% ■ 51%
A3 Demonstrating a Critical Stance	.83	5	▲ 64% ■ 32%
Total	.91	40	▲ 61% ■ 38%

*Reading Reliability = .XX
**Reliability Based on State Level Data

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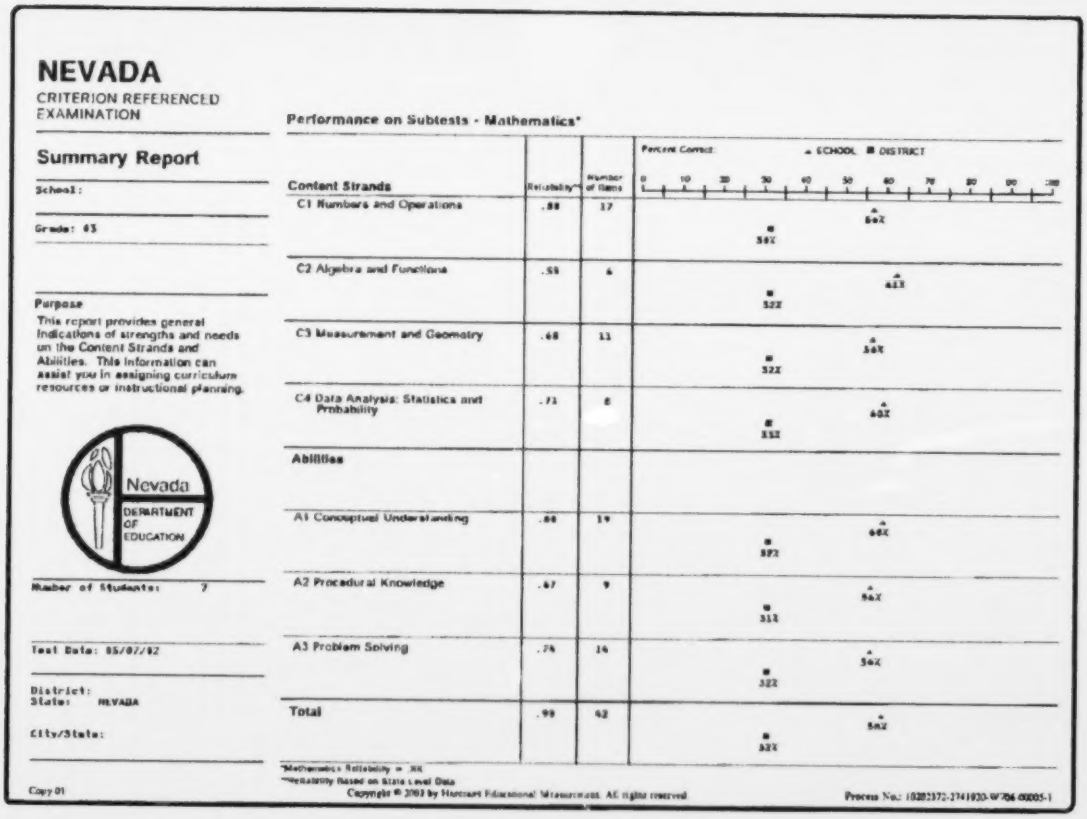
Figure 6b — School-Level Summary Score Report – Mathematics Grade 3



NEVADA

CRITERION REFERENCED EXAMINATION

Summary Report

School:

Grade: 03

Purpose

This report provides general indications of strengths and needs on the Content Strands and Abilities. This information can assist you in assigning curriculum resources or instructional planning.

Nevada Department of Education

Number of Students: 7

Test Date: 05/07/02

District:
State: NEVADA

City/State:

Copy 01

Performance on Subtests - Mathematics*

Percent Correct ▲ SCHOOL ■ DISTRICT

0 10 20 30 40 50 60 70 80 90 100

Content Strands	Reliability**	Number of Items	School	District
C1 Numbers and Operations	.88	17	64%	50%
C2 Algebra and Functions	.55	6	83%	52%
C3 Measurement and Geometry	.68	11	64%	52%
C4 Data Analysis: Statistics and Probability	.71	8	68%	55%
Abilities				
A1 Conceptual Understanding	.84	19	68%	57%
A2 Procedural Knowledge	.67	9	56%	51%
A3 Problem Solving	.74	14	56%	52%
Total	.93	42	58%	52%

*Mathematics Reliability = .86
**Reliability based on State Level Data

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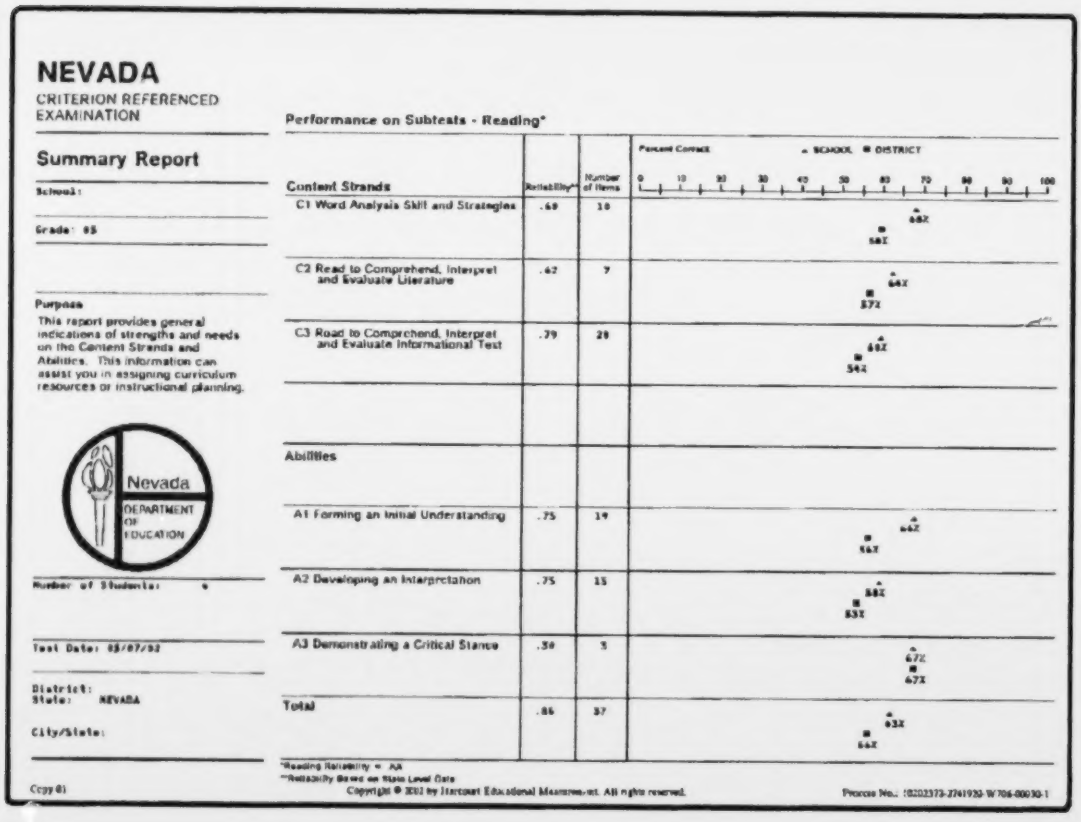
Figure 6c — School-Level Summary Score Report – Reading Grade 5



NEVADA
CRITERION REFERENCED EXAMINATION

Summary Report

School:

Grade: 05

Purpose
This report provides general indications of strengths and needs on the Content Strands and Abilities. This information can assist you in assigning curriculum resources or instructional planning.

Nevada DEPARTMENT OF EDUCATION

Number of Students: 9

Test Date: 03/07/02

District:
State: NEVADA

City/State:

Copy 01

Performance on Subtests - Reading*

Content Strands	Reliability**	Number of Items	Percent Correct ▲ SCHOOL ■ DISTRICT (0 10 20 30 40 50 60 70 80 90 100)
C1 Word Analysis Skill and Strategies	.69	10	▲68% ■58%
C2 Read to Comprehend, Interpret and Evaluate Literature	.62	7	▲64% ■57%
C3 Read to Comprehend, Interpret and Evaluate Informational Text	.79	20	▲68% ■54%
Abilities			
A1 Forming an Initial Understanding	.75	14	▲64% ■56%
A2 Developing an Interpretation	.75	15	▲68% ■53%
A3 Demonstrating a Critical Stance	.30	3	▲67% ■67%
Total	.86	37	▲63% ■56%

*Reading Reliability = .88
**Reliability Based on State Level Data

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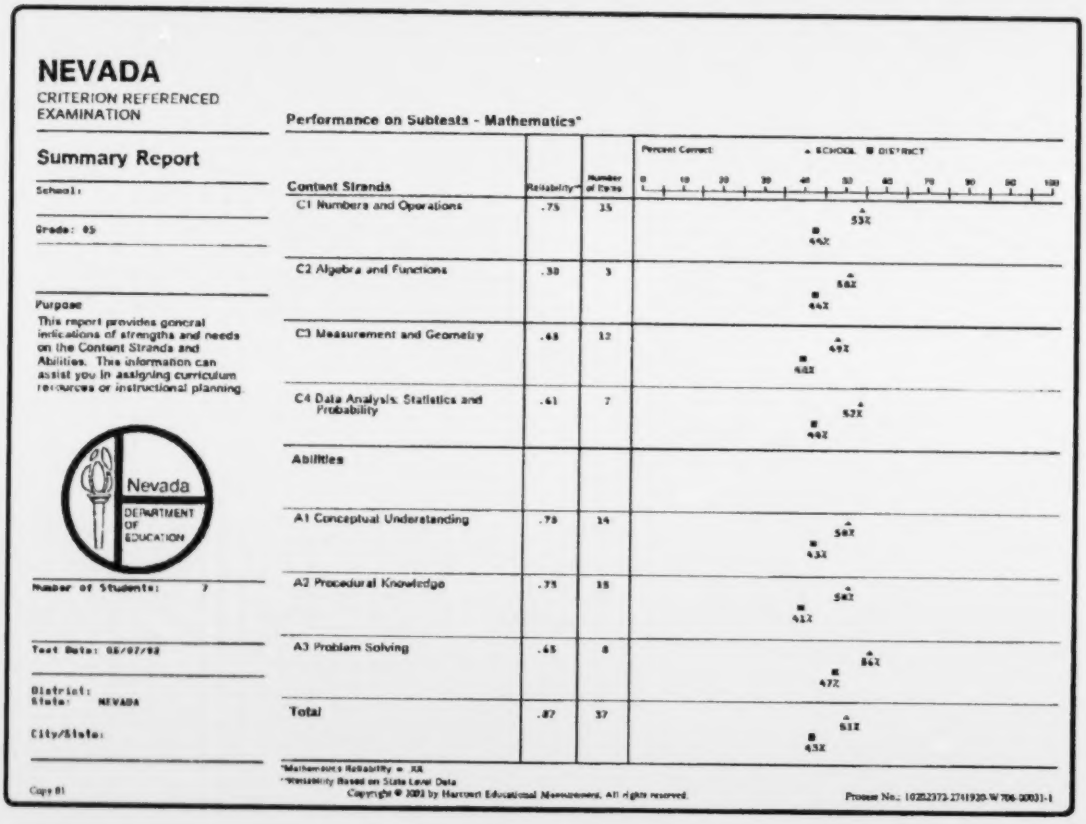
Figure 6d — School-Level Summary Score Report – Mathematics Grade 5



NEVADA
CRITERION REFERENCED EXAMINATION

Summary Report

School:

Grade: 05

Purpose
This report provides general indications of strengths and needs on the Content Strands and Abilities. This information can assist you in assigning curriculum resources or instructional planning.

Nevada DEPARTMENT OF EDUCATION

Number of Students: 7

Test Date: 05/07/98

District:
State: NEVADA

City/State:

Copy 01

Performance on Subtests - Mathematics*

Content Strands	Reliability**	Number of Items	Percent Correct ▲ SCHOOL ■ DISTRICT (0 10 20 30 40 50 60 70 80 90 100)
C1 Numbers and Operations	.75	15	▲ 53% ■ 44%
C2 Algebra and Functions	.30	3	▲ 58% ■ 44%
C3 Measurement and Geometry	.48	12	▲ 49% ■ 40%
C4 Data Analysis, Statistics and Probability	.61	7	▲ 52% ■ 44%
Abilities			
A1 Conceptual Understanding	.79	14	▲ 50% ■ 43%
A2 Procedural Knowledge	.75	15	▲ 54% ■ 41%
A3 Problem Solving	.45	8	▲ 56% ■ 47%
Total	.87	37	▲ 51% ■ 43%

*Mathematics Reliability = .88
**Reliability Based on State Level Data

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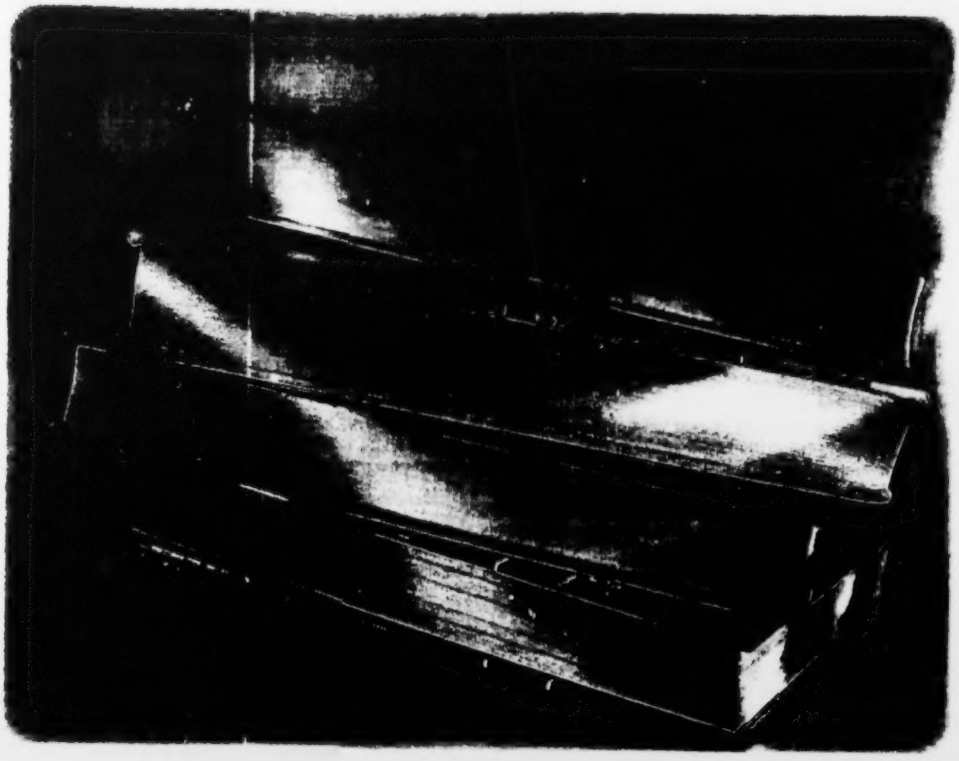
Reading Introduction



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Reading Introduction

All students must have the opportunities and resources to develop the language skills they need to pursue life's goals and to participate fully as informed, productive members of society.

— National English/Language Arts Standards

The goals of English/Language Arts education in Nevada emphasize the importance of students becoming proficient readers and writers. As students learn literacy skills, they must understand and practice effective reading strategies for a variety of purposes in a range of genres. Students must read often, interpreting and evaluating a broad range of classic and contemporary literature. They should also be active, critical consumers of media and technology information. Students should know how to evaluate and summarize information and communicate their conclusions clearly to others. They must be able to develop, organize, and conventionally present their ideas logically and effectively in written and oral formats.

The Nevada English Language Arts Standards provide a comprehensive conceptual framework within which explicit content is identified in a K-12 sequence of study. The criterion-referenced test in reading is designed to align the assessment system with instruction.

Nevada's Content and Performance Standards in English Language Arts are composed of 11 standards, four of which are tested in the reading portion of the criterion-referenced tests at grades 3 and 5. Content Standards 1 through 4 deal with students' abilities to use word analysis, reading process, and comprehension skills. Each standard has performance indicators that target specific competencies within the standard. The following is a description of the standards and those performance indicators tested. Those tested at the state level are check marked.

Nevada English Language Arts Standards and Progress Indicators

Standard 1: ***Students know and use word analysis skills and strategies to comprehend new words encountered in text.***

Grade 3 Progress Indicators	Grade 5 Progress Indicators
By the end of Grade 3, students know and are able to do everything required in the previous grades and: • Read texts aloud with fluency, accuracy, and appropriate intonation and expression; read high-frequency words to build fluency. ✔ Use knowledge of phonics and structural elements to read and to determine the meaning of unfamiliar words in context.	By the end of Grade 5, students know and are able to do everything required in the previous grades and: ✔ Use knowledge of phonics, structural elements, grammar, and syntax to read and to determine the meaning of unfamiliar words in context. ✔ Identify and use the meanings of high-frequency Greek- and Latin-derived

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Grade 3 Progress Indicators	Grade 5 Progress Indicators
✔ Use knowledge of prefixes, suffixes, roots, or base words to determine the meaning of words in context. ✔ Identify and use knowledge of diphthongs when reading; determine the meanings and other features of unknown words using dictionaries and glossaries. ✔ Identify and use knowledge of synonyms, antonyms, homophones, and homographs to expand vocabulary and understand text.	roots and affixes to determine the meanings of words. ✔ Find word origins and determine meanings of unknown words using dictionaries and glossaries. ✔ Use context clues such as restatement, definitions, and examples to determine the meaning of unknown words.

Standard 2: ***Students use reading process skills and strategies to build comprehension.***

Grade 3 Progress Indicators	Grade 5 Progress Indicators
• Identify pre-reading strategies, such as accessing prior knowledge, predicting, previewing, and setting a purpose to improve comprehension. • Use self-correcting strategies, such as self-questioning and rereading to gain meaning from text. • Recall essential points in text while reading; make and revise predictions about upcoming information. ✔ Restate facts and details in text to share information and organize ideas. • Adjust reading rate to suit difficulty of text.	• Select and apply pre-reading strategies that enhance comprehension, such as making a plan for reading, accessing prior knowledge, choosing a graphic organizer, and selecting reading rate. • Apply self-correcting strategies to gain meaning from text. ✔ Select and use a variety of skills and strategies during reading such as identifying main ideas, identifying fact and opinion or cause and effect, verifying predictions, summarizing, paraphrasing, and drawing conclusions to aid comprehension. • Clarify understanding of text by note taking, outlining, completing a graphic organizer, summarizing, and writing a report. • Adjust reading rate to suit reading purpose and difficulty of text.

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Standard 3: ***Students read to comprehend, interpret, and evaluate literature from a variety of authors, cultures, and times.***

Grade 3 Progress Indicators	Grade 5 Progress Indicators
• Compare plots, settings, and characters in a variety of works and by a variety of authors.	✔ Distinguish main incidents of a plot that lead to the climax, and explain how the problem or conflict is resolved.
✔ Make inferences about setting and characters' traits; make predictions about plot; check text for verification.	✔ Make inferences supported by the text about characters' traits and motivations and make predictions about conflicts and resolutions.
• Compare plots, settings, characters, and perspectives in a variety of works by a variety of authors from different cultures and times.	• Identify historical events as portrayed in literature.
✔ Identify and compare themes or messages in reading selections.	✔ Compare stated and implied themes in a variety of works.
• Identify simile, metaphor, onomatopoeia, and hyperbole in text.	✔ Locate and interpret figurative language, including simile, metaphor, and personification in text.
• Read and identify stories, plays, poetry, and nonfiction selections.	• Describe how authors' writing styles influence reader response.
	• Describe differences in purpose and structure among stories, plays, poetry, and nonfiction selections.

Standard 4: ***Students read to comprehend, interpret, and evaluate informational texts for specific purposes.***

Grade 3 Progress Indicators	Grade 5 Progress Indicators
✔ Distinguish essential information from titles, tables of contents, chapter headings, glossaries, indexes, diagrams, charts, and maps to locate information in texts for specific purposes. ✔ Distinguish between cause and effect, fact and opinion, and main idea and supporting details in text. • Ask questions and support answers by connecting prior knowledge with literal and inferential information in text. ✔ Draw conclusions about text and support them with textual evidence and experience. ✔ Read and follow three- and four-step directions to complete a simple task.	✔ Use knowledge of format, graphics, sequence, diagrams, illustrations, charts, and maps to comprehend text. • Clarify and connect main ideas and concepts and identify their relationship to other sources and related topics. • Read to evaluate new information and hypotheses by comparing them to known information and ideas. ✔ Draw conclusions and make inferences about text supported by textual evidence and experience. ✔ Identify authors' ideas and purposes in texts, including advertisements and public documents. ✔ Read and follow multi-step directions in order to perform procedures and complete tasks.

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The Nevada Criterion Referenced Tests

The Nevada Criterion Referenced Tests (CRT) in reading are passage-based, that is, all items (questions) are connected to an extended piece of written text. Because reading passages form the basis for assessing reading comprehension, there are certain considerations that guide the selection of the texts, including genre, passage length, and readability.

In assessing reading, it is important to provide opportunities for students to respond to different types of reading materials for different purposes. Reading passages found in the CRT reading examination may be literary, informational, or functional text. Passage length will range from 300 to 500 words for grade 3 and from 300 to 600 words for grade 5. Poems may be shorter than the minimum number of words designated, and pairing of two short passages may occur. The pairing of passages provides opportunities to assess analysis skills and yield the "richness" required to achieve the desired number of items per passage.

Besides being familiar with a range of reading genres, the readability levels of the passages must be consistent with grade-level appropriateness as well as with the reading purpose. Readability levels are determined through many variables: format, typography, content, literacy form and style, vocabulary difficulty, sentence complexity, concept load or density, cohesiveness, etc. Readability formulas are run on each passage; however, teacher expertise is the final determinate of grade-level appropriateness.

Since previously published text is used for the passages on the test, some texts may not follow grammar or usage rules students are taught to use in their own writing. The passage must be printed exactly as it was published unless the copyright holder gives permission for changes to be made.

The following is a description of each type of passage found in the reading portion of the criterion-referenced tests.

Literary Text – is writing that is read for enjoyment, entertainment or inspiration. The text may include short stories, literary essays, poems, historical fiction, fables, folk tales, plays, or excerpts from novels. If excerpts are selected, they must have a discernable beginning, middle, and end. The passages should reflect a variety of themes appropriate for and interesting to students at the designated grade level.

Informational Text – is writing that is read for a purpose and is similar to what students see in textbooks every day. It is read in order to solve problems, raise questions, provide information, or present new ideas. Informational passages may be drawn from magazines, newspaper articles, diaries, editorials, essays, biographies, and autobiographies. These selections should have readily identifiable key concepts and relevant supporting details. Informational passages should include a variety of grade-appropriate information sources, both primary and secondary.

Functional Text – is writing that is encountered in everyday life both inside and outside of the classroom. It includes consumer materials, how-to instructions, advertisements, and tables and graphic presentations of text.

The items that are used to evaluate understanding of these passages fall into three Ability Levels (Cognitive Domains) that are reported on the reading assessments.

The following charts show the Content Clusters and Ability Levels (Cognitive Domains).

Content Clusters
C1 – Word Analysis and Skills (Standard 1)
C2 – Comprehend, Interpret, and Evaluate Literature (Standard 3)*
C3 – Comprehend, Interpret, and Evaluate Informational Texts (Standard 4)*

Ability Levels (Cognitive Domains)
A1 – Form an Initial Understanding
A2 – Develop an Interpretation
A3 – Demonstrate a Critical Stance

Forming an Initial Understanding (A1)
These items assess the student's ability to form an initial impression of what is read. They may be thought of as "reading the lines." Items assessing vocabulary knowledge that students should bring to the text (e.g., prefix and suffix meanings) are included in this level. Some examples are:

- What is the plot of this passage?
- What best describes the main character(s) in the passage?
- The passage primarily tells you about...
- What does the author believe about this topic?
- What does the prefix re- mean in the word redistribute?

Developing an Interpretation (A2)
These items assess the student's ability to determine what is behind the first impression for a more complete understanding of what is being read. They may be thought of as "reading between the lines." Items assessing the student's ability to use context clues to determine the meaning of above-grade-level words are included in this level. Some examples are:

- How did the plot develop in this passage?
- How did characters change during the story?
- What caused this event?
- In what ways are these ideas important to the topic or theme of the passage?
- In paragraph nine, the word rudimentary means...

Demonstrating a Critical Stance (A3)
These items assess the student's ability to evaluate and consider how what is read communicates information or expresses ideas. They may be thought of as "reading beyond the lines." Some examples are:

- Determine the author's use of irony, personification, or humor.
- How does the author's use of irony, personification, or humor contribute to...?
- What could be added to improve the author's argument?

* While not reported separately, some items in C2 and C3 assess students' ability to use reading process strategies in the Standard 2 performance indicators.

The matrices below explain the configuration of the reading examinations at grades 3 and 5.

CRT Grade 3 Reading Examination Item Matrix

Content Cluster/ Ability Level (Cognitive Domain)	C1 Word Analysis and Skills (Standard 1)	C2 Comprehend ...Literature (Standards 2 & 3*)	C3 Comprehend ...Informational Text (Standards 2 & 4*)	Total Items	Percent
A1 Initial Understanding	8	3	5	16	40
A2 Interpretation	6	4	6	16	40
A3 Critical Stance	0	4	14	8	20
Total Items	14	11	15	40	
Percent	35	28	37		100

CRT Grade 5 Reading Examination Item Matrix

Content Cluster/ Ability Level (Cognitive Domain)	C1 Word Analysis and Skills (Standard 1)	C2 Comprehend ...Literature (Standards 2 & 3*)	C3 Comprehend ...Informational Text (Standards 2 & 4*)	Total Items	Percent
A1 Initial Understanding	7	3	6	16	36
A2 Interpretation	7	6	7	20	44
A3 Critical Stance	0	5**	4**	9	20
Total Items	14	14	17	45	
Percent	31	31	38		100

* Standard 2 (Reading process strategies) is assessed in Reporting Cluster 2 with Standard 3 (Comprehend…literature) and in Reporting Cluster C3 with Standard 4 (Comprehend…informational text), but no separate score is given for Standard 2.

** Indicates a constructed-response item.

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Constructed-Response Items

Constructed-response items are included in the CRT reading test in grade five. Constructed-response items allow students to demonstrate their understanding of reading passages using higher-level thinking skills. The items are written at the A2 and A3 ability levels, which require students to show *inferential* understanding of the text or to demonstrate a *critical stance*. The student is asked to use details from the reading passage to answer and support specific questions — something that cannot be done in a multiple-choice question.

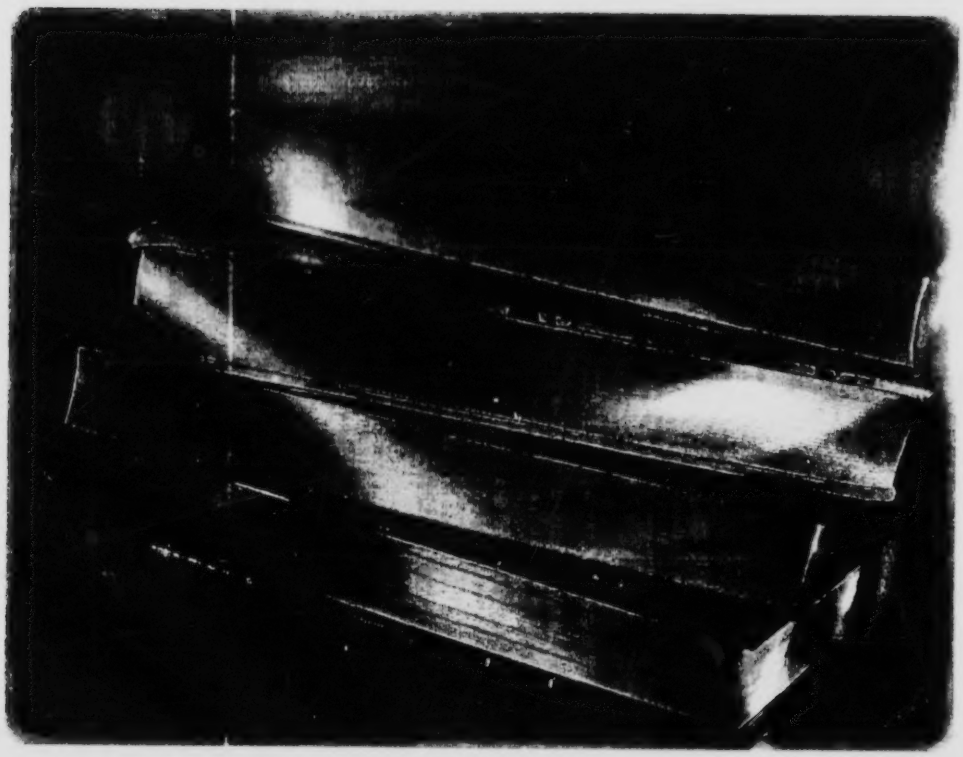
Students receive a score of 0-3 points on their answer, with 0 being the lowest and 3 being the highest. A score of 2 or 3 is deemed proficient. A student's score depends on how closely his or her answer matches the description in the item-specific rubric and the anchor papers for each constructed-response item.

For each constructed-response item, an item-specific rubric and anchor papers are used to guide the readers who score the student's responses. The item-specific rubric is used to select anchor papers. The anchor papers are actual student responses that are exemplary of the typical responses at each score point. The item-specific rubrics for reading items are developed from the general reading rubric below.

Constructed-Response Scoring Rubric

Score Point	Expectation
3	The response completely answers all parts of the question and displays thorough understanding of the skill(s) being tested. The response provides an answer that: • shows an accurate understanding of the text. • gives sufficient relevant details from the passage to support the answer.
2	The response partially, but adequately, answers the question and displays satisfactory understanding of the skill(s) being tested. The response provides an answer that: • shows a basic understanding of the text. • gives some relevant details from the passage to support the answer; however, it may give some details from the passage that do not support the answer.
1	The response demonstrates a limited understanding of the skill(s) being tested. The response provides an answer that: • indicates a lack of understanding of the text or of the intent of the question. • provides few, if any, relevant details from the passage to support the answer; however, it may give some unrelated details or inaccuracies about the passage.
0	The response demonstrates a lack of understanding of the skill(s) being tested. The response provides an answer that: • is unrelated to the question or repeats the question without adding anything to show understanding of the question or the passage. • is incorrect based on information in the passage.

Grade 3 Reading



Review Materials

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Grade 3 Reading

Reporting Category: C1 – Use Word Analysis Skills and Strategies

Ability Level: A1 – Forming an Initial Understanding

This item assesses a student's ability to **use vocabulary knowledge to form a basic understanding of the words and of the text.**

Performance Indicator: Use knowledge of prefixes, suffixes, roots, or base words to determine the meaning of words in context.

Passage: *I Love My Dentist* (See page 37 in this guide to read the passage.)

Test Item:

Read this line from the poem.

A gummy <u>toothless</u> society.

What does the underlined word mean?

A without teeth

B crooked teeth

C white teeth

D many teeth

Correct Response A: Students know what a "tooth" is. They must add the suffix meaning to determine what <u>toothless</u> means. The suffix *–less* means "without;" thus the word "toothless" means without teeth.

Response B: This response is incorrect. Some students may select this response because they do not know the meaning of the suffix *–less*. From the context of the sentence in the poem, they may believe that without regular visits to the dentist people would get crooked teeth.

Response C: This response is incorrect. Some students may choose this response because they do not know the meaning of the suffix *–less*. They may connect the topic of going to a dentist with having white teeth.

Response D: This response is incorrect. Some students may choose this response because they do not know the meaning of the suffix *–less*. They may think people who regularly visit the dentist will be able to keep many teeth.

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Grade 3 Reading

Reporting Category: C1 – Use Word Analysis Skills and Strategies

Ability Level: A2 – Developing an Interpretation

This item assesses a student's ability to **use vocabulary knowledge to develop a more complete understanding of the words and of the text.**

Performance Indicator: Use knowledge of phonics and structural elements to read and determine the meaning of unfamiliar words in context.

Passage: *Puppy Love Pet Tags* (See page 44 in this guide to read the passage.)

Test Item:

In this passage, the word veterinarian means a

A pet owner.

B pet's home.

C pet's doctor.

D pet's store.

Correct Response C: The advertisement states that a person might want to put the name of the pet's veterinarian on the back of the tag "if the pet takes medicine." Students who know how to use context clues to determine the meaning of unknown words will recognize this as a clue that a veterinarian is a pet's "doctor."

Response A: This response is incorrect. The advertisement mentions that the owner's name can be placed on the tag. Students who do not know how to use context clues to determine the meaning of unknown words may rely on what they remember from the text. They may erroneously assume that veterinarian means the pet's "owner."

Response B: This response is incorrect. The advertisement mentions that the owner's address can be placed on the pet's tag. Some students may erroneously believe this is a clue that veterinarian means the pet's "home."

Response D: This response is incorrect. The advertisement is about purchasing tags for pets. Some students may erroneously believe this is a clue that veterinarian means a pet "store."

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Grade 3 Reading

Reporting Category: C2 – Read to Comprehend, Interpret, and Evaluate Literature

Ability Level: A1 – Forming an Initial Understanding

This item assesses a student's ability to **form a basic understanding of what is read by recalling details from the text.**

Performance Indicator: Restate facts and details in text to share information and organize ideas.

Passage: *Fish Fry and Apple Pie* (See page 39 in this guide to read the passage.)

Test Item:

When they first tried to fish, Henry's cousins caught

A a wooden sign.

B a wiggly fish.

C a fat frog.

D a dirty shoe.

Correct Response D: The story states that one of the things the cousins first caught was a muddy sneaker.

Response A: This response is incorrect. Henry and Becky hung a sign on a tree at the beginning of the story, but the cousins did not catch a sign when they first went fishing.

Response B: This response is incorrect. The cousins did not catch fish when they first started to fish.

Response C: This response is incorrect. There is no mention of a frog being caught by anyone.

Grade 3 Reading

Reporting Category: C2 – Read to Comprehend, Interpret, and Evaluate Literature

Ability Level: A2 – Developing an Interpretation

This item assesses a student's ability to **go beyond the first impression of a text to develop a more complete understanding of what is being read by making inferences about the setting.**

Performance Indicator: Make inferences about setting and character traits; make predictions about plot; check text for verification.

Passage: *Fish Fry and Apple Pie* (See page 39 in this guide to read the passage.)

Test Item:

The park and riverbank setting was a good place for the Hopkins family to have their reunion because

A none of the family had been there before.

B none of the cousins had gone fishing before.

C they all enjoyed the outdoor space and activities.

D they could pick the apples for Grandma's pie there.

Correct Response C: In the story, the members of the Hopkins family enjoy outdoor activities. Students should infer that this is a reason why the park and riverbank is a good place for the reunion.

Response A: This response is incorrect. Some students may choose this response because they know this could be a good reason for choosing a place to do something and they may not go back to the text to verify the correctness of the answer in this situation. Henry says he hopes the cousins will let him play games this year. This indicates the family may have held reunions at the park before.

Response B: This response is incorrect. Some students may choose this response because this could be a good reason for choosing a place to do something. The passage states Cousin Billy said "I know a better spot." This suggests he had fished at the park before.

Response D: This response is incorrect. Some students may choose this response because they know this could be a good reason for choosing a place to do something. It would also indicate they did not go back and read to discover that Grandma had brought an already baked pie to the reunion.

Grade 3 Reading

Reporting Category: C2 – Read to Comprehend, Interpret, and Evaluate Literature

Ability Level: A3 – Demonstrating a Critical Stance

This item assesses a student's ability to **evaluate and consider how the author expresses critical ideas and information.**

Performance Indicator: Make inferences about setting and character traits; make predictions about plot; check text for verification.

Passage: *Fish Fry and Apple Pie* (See page 39 in this guide to read the passage.)

Test Item:

When he saw Henry fishing, Billy said, "I know a better spot," because he

A thought he knew more about the river than others.

B had asked Grandpa where the best spot was.

C wanted to help Henry catch a fish.

D thought he could do everything well.

Correct Response D: Billy was always used to winning. The student can infer that he thought he could do everything well.

Response A: This response is incorrect. The story suggests that Billy did not know much about the river at all.

Response B: This response is incorrect. There is no indication in the story that Billy had consulted anyone about the best spots to fish.

Response C: This response is incorrect. Based on the story, Billy did not want to help Henry in any way.

Grade 3 Reading

Reporting Category: C3 – Read to Comprehend, Interpret, and Evaluate Informational Text

Ability Level: A1 – Forming an Initial Understanding

This item assesses a student's ability to **form a basic understanding of what is being read by recalling details from the text.**

Performance Indicator: State facts and details in text to share information and organize ideas.

Passage: *The Biggest Turtles* (See page 42 in this guide to read the passage.)

Test Item:

Sea turtles can sleep under water because they

A do not need much air when they stay still.

B breathe water when they are sleeping.

C come on land to lay their eggs.

D are the world's biggest turtles.

Correct Response A: The passage states that if sea turtles do not swim around much, they can stay under water for hours. Therefore students should know that this is the reason why they can sleep under water.

Response B: This response is incorrect. Some students may select this response because they assume that sleeping under water would require that the sea turtles be able to breathe water.

Response C: This response is incorrect. Some students may choose this response because the passage states that reptiles come on land to lay their eggs, and the students may mistakenly think that is why the sea turtles sleep under water.

Response D: This response is incorrect. Some students may select this response because they mentally connect the sea turtle's large size with the ability to sleep under water.

Grade 3 Reading

Reporting Category: C3 – Read to Comprehend, Interpret, and Evaluate Informational Text

Ability Level: A2 – Developing an Interpretation

This item assesses a student's ability to **go beyond the first impression of a text to develop a more complete understanding of what is being read by drawing conclusions.**

Performance Indicator: Draw conclusions about text and support them with textual evidence and experience.

Passage: *Puppy Love Pet Tags* (See page 44 in this guide to read the passage.)

Test Item:

Which idea about "Puppy Love Pet Tags" is suggested by information in the ad?

A They are easily lost.

B They do not weigh very much.

C They are sent with a pet collar.

D They are sold by pet doctors.

Correct Response B: The ad says the tags are so light the pet will not even know it is wearing one, suggesting the tags must not weigh very much.

Response A: This response is incorrect. Some students may select this response because tags frequently do fall off pet collars.

Response C: This response is incorrect. Some students may choose this response because the advertisement mentions the tags are to be put on pet collars.

Response D: This response is incorrect. Some students may select this response because the advertisement says the tag can have the name of the pet's doctor on it.

Grade 3 Reading

Reporting Category: C3 – Read to Comprehend, Interpret, and Evaluate Informational Text

Ability Level: A3 – Demonstrating a Critical Stance

This item assesses a student's ability to **analyze and consider what ideas are expressed but not stated.**

Performance Indicator: Draw conclusions about text and support them with textual evidence and experience.

Passage: *Puppy Love Pet Tags* (See page 44 in this guide to read the passage.)

Test Item:

The "happy ending" Jordan Bollerio wrote about in his letter happened because

A Jordan's family had fun on their vacation.

B Jordan's family got to meet a truck driver.

C Caddy's lost Puppy Love Pet Tag was found at a rest area.

D Caddy was wearing a Puppy Love Pet Tag on his collar.

Correct Response D: The letter thanks the makers of Puppy Love Pet Tags, tells about his dog getting lost, and states that the "story" would not have a happy ending if it weren't for Puppy Love Pet Tags. Students should conclude from this that Caddy was wearing a Puppy Love Pet Tag.

Response A: This response is incorrect. Some students may select this response because the letter mentions that the family was returning from a vacation when Caddy was lost.

Response B: This response is incorrect. Some students may choose this response because the letter says that the family went to meet the truck driver to get Caddy from him.

Response C: This response is incorrect. Some students may select this response because they think it was Caddy's tag that was lost and found rather than Caddy.

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Grade 3 Reading

1 Read this sentence.

Elan will present his book report to the class.

Which choice below means the same or almost the same as present?

A announce

B explain

C reward

D receive

2 Read this sentence.

Ana _____ a _____ hamburger.

Which pair of homophones (words that sound alike) best completes the sentence?

A ate, plane

B ate, plain

C eight, plain

D eight, plane

3 Read the sentence below.

The giant balloon will not fit in the car.

Which word has the same sound of "g" as the word giant?

A edge

B flag

C gift

D night

Reading Sample Test Passage

I Love My Dentist

by Grandpa Tucker

My friends and I appreciate
Our dentist, Doctor Maik M. Strait.
He stands there with his knowing stare
Each time we crawl into his chair.

He cleans our teeth with special goo.
Why, he even cleans the back sides, too.
Then he gives us special tips
On how to brush inside our lips.

Oh! Cavities! When he finds one,
He grabs the phone! Dials 911!
Crowds line the streets so they can see
A cavity emergency.

If there's one thing I must keep still
It's Dr. Strait's annoying drill.
To keep it quiet there is one way,
Just floss and brush teeth every day!

So we admire our Doctor Strait.
Yes, even when he makes us wait.
Without these dentists we might be,
A gummy toothless society.

"I Love My Dentist" © 1999 by Bob Tucker.

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4 The poem suggests that Dr. Strait's drill is

A big.

B white.

C noisy.

D wet.

5 At the end of the poem, the poet wrote, "So we admire our Dr. Strait." People probably admire Dr. Strait because

A he makes people wait to see him.

B there is a drill in his office.

C he takes care of people's teeth.

D crowds come when he calls.

6 What is the main idea of this poem?

A Dentists give us tips on brushing.

B Dentists clean teeth with special goo.

C Dentists dial 911 for emergencies.

D Dentists help keep our teeth healthy.

7 Read this line from the poem.

My <u>friends</u> and I appreciate,

Which word below has the same vowel sound as the underlined word?

A still

B gives

C time

D yet

8 Read these lines from the poem.

Oh! Cavities! When he finds one,
He grabs the phone! Dials 911!
Crowds line the streets so they can see
A cavity emergency.

These lines let the reader know that the poet is trying to be

A serious.

B funny.

C kind.

D shy.

Reading Sample Test Passage

Fish Fry and Apple Pie

(Passage unavailable – Web publishing rights denied.
Please refer to printed version.)

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9 From the story, you can tell that Henry is

A younger than Becky.

B bigger than Billy.

C nicer than Becky.

D taller than Aunt Bessie.

10 Henry was sad because he

A did not get a chocolate brownie.

B got lost when he went for a walk.

C wanted to help hang the sign.

D felt less successful than his cousins.

11 Why did Becky stay with Henry at the riverbank?

A She promised to teach him how to fish.

B She did not want him to be lonely.

C She wanted some of his apple pie.

D She knew he was too little to stay by himself.

12 At the reunion, Billy found out that

A he could catch more fish than Henry.

B he couldn't be quiet enough to catch fish.

C he could learn something from Henry.

D he was smarter than everyone else there.

13 When all the cousins were playing games, Henry showed that it is important to

A win every game you play.

B always do your best.

C cry if others aren't nice to you.

D treat others as they treat you.

Reading Sample Test Passage

The Biggest Turtles

by Frank Staub

The world's biggest turtles don't walk on land. They swim in the sea. They are the sea turtles. Like most turtles, sea turtles hardly ever hurry. They usually swim slowly, flapping their great front flippers like birds in flight. But if they have to, sea turtles can swim fast. And they can swim very, very far.

Sea turtles spend most of their time under water. They can stay under water for about five or ten minutes. Then they have to come up for air. But if they don't swim around much, sea turtles can stay under water for hours. Divers sometimes find sea turtles sleeping under rocky ledges and sunken ships.

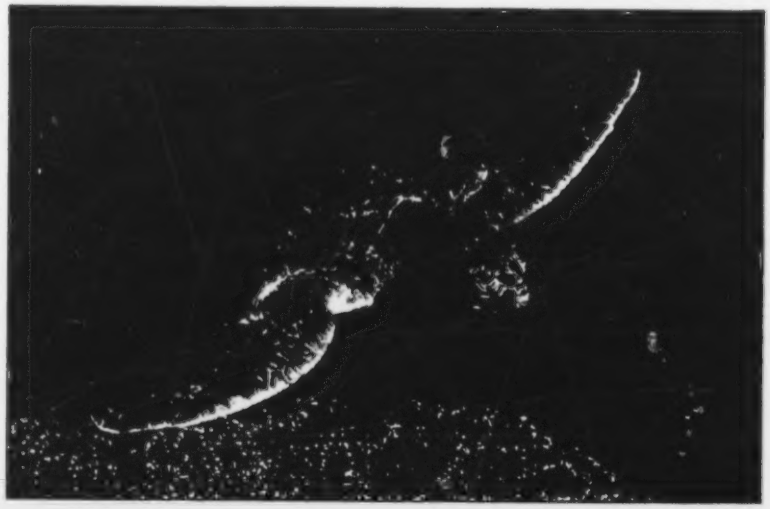

Image © by Tom Brakefield/CORBIS

Sea turtles are reptiles. Snakes, lizards, and alligators are reptiles too. Reptiles have lungs to breathe air. Many reptiles eat, sleep, or travel in the water. But they still must come on land to lay their eggs.

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"Sea Turtles" by Frank Staub. Copyright © 1995 by Lerner Publications Company, a division of Lerner Publishing Group. Used by permission. All rights reserved.

14 In what way are sea turtles' flippers and birds' wings alike?

- **A** They have feathers on them.
- **B** They help the animals move.
- **C** They help the animals stay under water.
- **D** They are used for flying in the air.

15 The author wrote this passage to

- **A** give information about sea turtles.
- **B** tell a fun story about sea turtles.
- **C** explain how to find sea turtles.
- **D** show that sea turtles are good pets.

16 In this passage, which word or group of words below means about the same as <u>usually</u>?

- **A** hardly ever
- **B** sometimes
- **C** never
- **D** almost always

17 What do many reptiles do on land?

- **A** sleep
- **B** lay eggs
- **C** breathe air
- **D** eat

18 Which sentence is an **opinion**?

- **A** Sea turtles are the world's biggest turtles.
- **B** Sea turtles spend time under water.
- **C** Sea turtles are fun to watch.
- **D** Sea turtles are reptiles.

19 How long can sea turtles stay under water if they don't swim around much?

- **A** hours
- **B** days
- **C** weeks
- **D** months

Reading Sample Test Passage

PUPPY LOVE PET TAGS

Pet tags give anyone who finds your lost pet a way to find you.

Square Style

Heart Style

Diamond Style

Circle Style

Available in four popular colors: red, blue, purple and gold.

PUPPY LOVE PET TAGS are great for cats, dogs, and other pets that wear collars. These tags are so light your pet will not even know it is wearing it. Each tag can have five lines of information on the front—your pet's name, your name, your street address, the city and state you live in, and your telephone number. Up to five more lines of information can be put on the back of the tag for 25 cents a line. If your pet takes medicine, you could put the name of your veterinarian on the back. If your pet has more than one collar, you might want to order extra pet tags.

Don't forget — Tell your friends and neighbors about Puppy Love Pet Tags.

Dear Puppy Love,

Thank you for making **Puppy Love Pet Tags.** On our way home from vacation, our collie, Caddy, got lost at a rest area. We searched and searched but couldn't find him anywhere. When we got home, there was a message on our answering machine. A truck driver had found Caddy. We met him the next afternoon and got our dog back. If it weren't for **Puppy Love Pet Tags,** this story would not have had a happy ending.

Sincerely,
Jordan Bollerio

Use this easy form to order your pet tags.

Send to: PUPPY LOVE PET TAGS, P.O. Box 121, Reno, NV 89501

If more than one tag is ordered, write the information on plain paper and include it with this form.

Words For Each Line (On the Front)	
1	
2	
3	
4	
5	

Words For Each Line (On the Back)	
1	
2	
3	
4	
5	

Your Name				
Your Street				
Your City, State, and Zip				
SHAPE	❍ Square	❍ Heart	❍ Diamond	❍ Circle
COLOR	❍ Red	❍ Blue	❍ Purple	❍ Gold

No. of Tags ordered	
Tag Cost ($2.50)	
Additional lines (__ x $.25)	
Shipping ($1.00)	
Total Amount	

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20 PUPPY LOVE PET TAGS included Jordan Bollerio's letter in their ad to

A show the reader how thoughtful truck drivers are.

B help the reader see how colorful the tags are.

C make the reader feel happy for Jordan.

D encourage the reader to buy the tags.

21 Which word below means the same or almost the same as <u>shipping</u>?

A making

B printing

C mailing

D answering

22 The ad states that a person might want to order extra pet tags if

A he can't decide which shape he likes best.

B he wants to change his pet's tag daily.

C his pet has to take medicine often.

D his pet has two or more collars.

23 The ad says, "Use this easy form to order your pet tags." This sentence means that the form is easy to

A fill out.

B send for.

C look for.

D cut out.

24 The PUPPY LOVE PET TAGS company asks readers to

A tell others about the tags.

B talk to Jordan Bollerio.

C order pet collars from them.

D take pets on vacation.

Reading Test Answer Key

Item Number	Reporting Category	Ability Level	Answer Key
1	C1	A1	B
2	C1	A1	B
3	C1	A1	A
4	C2	A2	C
5	C2	A2	C
6	C2	A2	D
7	C1	A1	D
8	C2	A3	B
9	C2	A2	A
10	C2	A2	D
11	C2	A1	B
12	C2	A3	C
13	C2	A3	B
14	C3	A1	B
15	C3	A3	A
16	C3	A1	D
17	C3	A1	B
18	C3	A3	C
19	C3	A1	A
20	C3	A2	D
21	C1	A2	C
22	C3	A1	D
23	C3	A2	A
24	C3	A1	A

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Reading Test Answer Key

Item Number	Reporting Category	Ability Level	Answer Key
1	C1	A1	B
2	C1	A1	B
3	C1	A1	A
4	C2	A2	C
5	C2	A2	C
6	C2	A2	D
7	C1	A1	D
8	C2	A3	B
9	C2	A2	A
10	C2	A2	D
11	C2	A1	B
12	C2	A3	C
13	C2	A3	B
14	C3	A1	B
15	C3	A3	A
16	C3	A1	D
17	C3	A1	B
18	C3	A3	C
19	C3	A1	A
20	C3	A2	D
21	C1	A2	C
22	C3	A1	D
23	C3	A2	A
24	C3	A1	A

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Grade 5 Reading

Review Materials

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Grade 5 Reading

Reporting Category: C1 – Word Analysis Skills and Strategies

Ability Level: A1 – Forming an Initial Understanding

This item assesses the student's ability to **use knowledge of prefixes and suffixes to understand words in text.**

Performance Indicator: Identify and use the meanings of high frequency Greek- and Latin-derived roots and affixes to determine the meaning of words.

Passage: This item is not attached to a passage.

Test Item:

Read the sentence.

Sara built a birdhouse with <u>precut</u> wood.

The prefix pre- helps the reader know that <u>precut</u> means the wood was cut

A into many pieces.
B from one large piece.
C before it was used.
D after it was used.

Correct Response C: The prefix pre- means "before" so the wood was cut before it was used.

Response A: This response is incorrect. Some students may incorrectly assume "into many pieces" is correct because they know it takes many pieces of wood to build a birdhouse.

Response B: This response is incorrect. Some students may incorrectly assume that "from one large piece" is correct because they know one piece of wood could be cut to build the birdhouse.

Response D: This response is incorrect. Some students may incorrectly assume from the verb "used" that the cutting happened "after" the birdhouse had already been built.

Grade 5 Reading

Reporting Category: C1 – Word Analysis Skills and Strategies

Ability Level: A2 – Developing an Interpretation

This item assesses the student's ability to **interpret the meaning of difficult words in the text.**

Performance Indicator: Use context clues such as restatement, definitions, and examples to determine the meaning of unknown words.

Passage: *River Dance* (See page 59 in this guide to read the passage.)

Test Item:

In the fourth paragraph, what does the word gangly mean?

A droopy tailed

B loud sounding

C long legged

D strange acting

Correct Answer C: The sentences following the word "gangly" discuss how very tall the cranes are, and the text states: "Wow! That's the height of an average second-grader. The cranes step through the stubble on long, spindly legs."

Response A: This response is incorrect. Some students may select this response because the same paragraph states "their tufty tails droop."

Response B: This response is incorrect. Some students may choose this response because the passage tells how loud and noisy the cranes are.

Response D: This response is incorrect. Some students may choose this response because the passage suggests that the birds are strange-looking and the "very special dance" may be considered strange.

Grade 5 Reading

Reporting Category: C2 – Read to Comprehend, Interpret, and Evaluate Literature

Ability Level: A1 – Forming an Initial Understanding

This item assesses the student's ability to **form a basic understanding by paraphrasing details from the text.**

Performance Indicator: Select and use a variety of skills and strategies during reading such as identifying fact and opinion or cause and effect, verifying predictions, summarizing, paraphrasing, drawing conclusion to aid in comprehension.

Passage: *River Dance* (See page 59 in this guide to read the passage.)

Test Item:

The sandhill cranes are dancing in order to

A gain strength for the rest of their long flight.

B celebrate their arrival in the Platte River valley.

C protect their nesting grounds from predators.

D pair up for practice before the mating season begins.

Correct Answer D: The passage says the cranes are dancing to pair up and the more serious mating dances will take place later on at the northern nesting grounds.

Response A: This response is incorrect. Some students may select this response because the passage states that the cranes stop in the Platte River valley to rest, regain energy, and refuel.

Response B: This response is incorrect. Some students may choose this response because the passage says that the cranes have already flown nonstop about six hundred miles which suggests that finally arriving at this destination would be a cause for celebration.

Response C: This response is incorrect. Some students may choose this response because the passage tells how the cranes roost in special places for safety from predators and that some of the cranes seem to act as "guard birds" at night.

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Grade 5 Reading

Reporting Category: C2 – Read to Comprehend, Evaluate, and Interpret Literature

Ability Level: A2 – Developing an Interpretation

This item assesses the student's ability to **form a more complete understanding by interpreting the meaning of figurative language in the text.**

Performance Indicator: Locate and interpret figurative language, including simile, metaphor, and personification in text.

Passage: *River Dance* (See page 59 in this guide to read the passage.)

Test Item:

In paragraph 2, the author writes: "The High Plains of Eastern Colorado are still locked in winter." This means that

A it is colder in the High Plains than it has been in past years.

B the High Plains have snowy roads that are dangerous to drive on.

C it will be icy in the High Plains until spring break comes.

D the High Plains are continuing to experience cold weather.

Correct Answer D: The figurative language "…still locked in winter," means that the cold winter weather that has been going on for some time is still continuing in the region.

Response A: This response is incorrect. Some students may select this response because the passage describes the weather as extremely cold with swirls of snow, a 15-degree temperature outside, and blowing wind, followed by the comment, "Brrr!"

Response B: This response is incorrect. Some students may choose this response because the passage mentions the swirling snow and the fact that the family is driving; they may also assume that "locked in winter" means driving would be dangerous.

Response C: This response is incorrect. Some students may select this response because the passage mentions both spring break and the terribly icy, cold weather.

Grade 5 Reading

Reporting Category: C2 – Read to Comprehend, Evaluate, and Interpret Literature

Ability Level: A2 – Developing an Interpretation

This item assesses the student's ability to **form a more complete understanding of the text by drawing conclusions.**

Performance Indicator: Select and use a variety of skills and strategies during reading such as identifying fact and opinion or cause and effect, verifying predictions, summarizing, paraphrasing, and drawing conclusions to aid in comprehension.

Passage: *River Dance* (See page 59 in this guide to read the passage.)

Test Item:

Write your answer to Question 1 on page 2 of your Answer Booklet.

In the passage, the sandhill cranes stop in the Platte River valley of Nebraska while migrating from Texas to the north.

Using information from the passage, explain why cranes might not stop in the Platte River valley in the future.

Score Point	Expectation
3	Response completely and accurately explains why cranes might not stop in the Platte River valley in the future. The response includes relevant supporting details from the passage.
2	Response explains why cranes might not stop in the Platte River valley in the future. The response includes some relevant details from the passage, but it may contain a few inaccuracies.
1	Response attempts to explain why cranes might not stop in the Platte River valley in the future. The response may contain numerous inaccuracies or misunderstandings about the passage. Few, if any, relevant details from the passage are provided.
0	Response is totally inaccurate and/or irrelevant.

Grade 5 Reading

Sample Response for Each Score Point:

3 – In the future, the sandhill cranes may not stop in the Platte River valley because the valley will not be as suitable for them as it is now. The passage says that the sandhill cranes stop there now because there are still some bare sandbars and islands in the middle of the mile-wide river where the cranes can safely roost. It also says that the cranes need flooded meadows where they can find grubs and worms to eat. It also says that people are beginning to divert water from the river to water the crops on their farms. They have also built dams upstream from the valley. If they continue to divert more and more water and to build more dams, there will no longer be floods. The tall trees will grow on the sandbars and islands, and cranes will not want to be there.

2 – Sandhill cranes may not stop in the Platte River valley in the future because the valley may be different. Cranes stop there now because they can find food to eat and a place to rest. They eat grubs and worms. They like to rest in tall trees. If the cranes can't find enough food to eat, they will not want to stop there anymore. There may not be any tall trees so they won't have a place to rest if they stop there.

1 – Sandhill cranes may not stop in the Platte River valley in the future because it won't be a good place for them to stop anymore. It may be too flooded for them to find a place to roost or to find food to eat. Their nests might wash away in the floods. They will look for some other place to stop that has what they need.

0 – The Platte River valley is not north. The sandhill cranes do a funny dance that I would really like to see.

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Grade 5 Reading

Reporting Category: C2 – Read to Comprehend, Interpret, and Evaluate Literature

Ability Level: A3 – Demonstrating a Critical Stance

This item assesses the student's ability to **analyze and evaluate traits of characters in the text.**

Performance Indicator: Make inferences supported by the text about character traits and motivations, and make predictions about conflicts and resolutions.

Passage: *WHAT GOOD'S A THUMB?* (See page 62 in this guide to read the passage.)

Test Item:

The speaker in this poem can **best** be described as

A practical.

B worried.

C doubtful.

D generous.

Correct Answer A: The speaker lists "practical" uses for the thumb that help us do everyday tasks and offers "practical" advice on what to do when the thumb is sore; therefore, the speaker can be described as a "practical" person.

Response B: This response is incorrect. Some students may choose this response because the speaker talks about having a sore thumb and asking for help which will lead some students to assume that the speaker is "worried."

Response C: This response is incorrect. Some students may select this response because the speaker asks questions at the beginning of the poem. They may assume this means that the speaker is "doubtful" about something.

Response D: This response is incorrect. Some students may choose this response because the speaker mentions many uses of a thumb and suggests asking for help when a thumb is sore. The number of things the speaker mentions the thumb does may lead some students to assume that the speaker is "generous." Other students may wrongly associate the help as being performed by the speaker, making the speaker a "generous" person.

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Grade 5 Reading

Reporting Category: C3 – Read to Comprehend, Interpret, and Evaluate Informational Text

Ability Level: A1 – Forming an Initial Understanding

This item assesses the student's ability to **form a basic understanding by identifying important facts in the text.**

Performance Indicator: Select and use a variety of skills and strategies during reading such as identifying fact and opinion or cause and effect, verifying predictions, summarizing, paraphrasing, drawing conclusion to aid in comprehension.

Passage: *Leaf and Seed Bugs* (See page 64 in this guide to read the passage.)

Test Item:

According to the directions, the scissors are used to poke holes in the body to attach the bug's

A wings.

B head.

C legs.

D eyes.

Correct Answer C: In Step 4 of the directions, the reader is told to use the scissors to poke holes in the body parts to attach the legs.

Response A: This response is incorrect. Some students may choose this response because they remember that the directions mention attaching wings to the body, but they may not go back to the passage to check whether or not the wings are attached by poking holes in the body.

Response B: This response is incorrect. Some students may select this response because they remember that the directions mention attaching a head to the body, but they may not go back to the passage to check whether or not the head is attached by poking holes in the body.

Response D: This response is incorrect. Some students may select this response because they remember that the directions mention attaching eyes to the bug, but they may not remember that the eyes are attached to the head and they will not go back to the passage to check.

Grade 5 Reading

Reporting Category: C3 – Read to Comprehend, Interpret, and Evaluate Informational Text

Ability Level: A2 – Developing an Interpretation

This item assesses the student's ability to **form a more complete understanding of the text by drawing conclusions.**

Performance Indicator: Draw conclusions from and make inferences about text supported by textual evidence and experience.

Passage: *When Money Grew on Trees* (See page 66 in this guide to read the passage.)

Test Item:

Based on information in the passage, which of the following did the Spaniards do in Mexico?

A They conquered the Aztecs and became harsh rulers.

B They drank cacahuatl with red dye in it.

C They helped the poor Aztecs become wealthy.

D They suffered a great deal.

Correct Answer A: The passage states that the invading Spaniards forced the native people to grow more and more cacao beans for the royal warehouses, even though the land and the people suffered greatly. Therefore it can be concluded that the Spaniards conquered the Aztecs and were harsh rulers.

Response B: This response is incorrect. Some students may choose this response because the passage mentions that the Aztecs sometimes put red dye in the cacahuatl when they made it to drink. These students will be confused about what the Aztecs did versus what the Spaniards did.

Response C: This response is incorrect. Some students may select this response because they will have difficulty separating the ideas in the passage about the Aztec versus the Spaniards. The passage mentions that the Spaniards were "…dreaming of riches…"

Response D: This response is incorrect. Some students may choose this response because they will be confused about who the conquerors were and who the conquered (native people) were. The passage mentions that the native people suffered greatly.

Grade 5 Reading

Reporting Category: C3 – Read to Comprehend, Interpret, and Evaluate Informational Text

Ability Level: A3 – Demonstrating a Critical Stance

This item assesses the student's ability to **analyze and evaluate the text by distinguishing between facts and opinions.**

Performance Indicator: Select and use a variety of skills and strategies during reading such as identifying fact and opinion or cause and effect, verifying predictions, summarizing, paraphrasing, or drawing conclusions to comprehend text.

Passage: *When Money Grew on Trees* (See page 66 in this guide to read the passage.)

Test Item:

Which sentence from the passage is an **opinion**?

A Europeans first saw cacao beans in 1502, when Christopher Columbus and his son Ferdinand stumbled across them.

B They happily paid large sums of money for very small crates of cacao beans.

C Spanish chocolate was made with cacao beans, chili peppers, vanilla, and water.

D By 500 B.C., people in Mexico and Central America were growing these cacao trees in special orchards.

Correct Answer B: The response expresses an opinion because it is the author's belief that the Europeans "happily" paid for the beans. Others might say they paid because they had to but they were not happy about it.

Responses A, C, D: These responses are incorrect. The statements are facts because they can be proven.

Reading Sample Test Questions

1 Read this sentence.

The butcher has to <u>sharp</u> his knife often.

Which suffix should be added to the word sharp to make the sentence correct?

A -er

B -en

C -est

D -ful

2 Read the sentence below.

I know_____ going to see _____ friends over _____.

Which set of homophones completes the sentence correctly?

A there, they're, their

B their, there, they're

C they're, their, there

D there, their, they're

3 Read the sentence below.

My little brother is <u>timid</u>.

Which word is a synonym for <u>timid</u>?

A bold

B funny

C mean

D shy

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Reading Sample Test Passage

River Dance

by Ann Cooper

Birds that migrate over the central United States stop to rest on rivers and pothole lakes throughout the prairie region. Because many rivers have been dammed and many lakes have been drained for agriculture, those that remain have become a critical habitat for these feathered travelers.

The High Plains of Eastern Colorado are still locked in winter. It is mid-March, spring break, but it doesn't feel like spring. Swirls of snow from last week's storm fringe fence lines and gulches. Weeds and grasses along the highway are tawny yellow and dead. Away to the north, all we can see of the South Platte River is a snaking line of leafless cottonwoods. Outside, the temperature is about fifteen degrees and the wind is blowing. Brrrr! Some people we know are heading west to the mountains to ski over spring break. Others are heading to warm places. We are zooming east on the interstate on our way to Kearney, Nebraska, to watch a very special dance.

The dancers are birds, sandhill cranes, thousands and thousands of them. In early spring they begin to migrate north to their nesting grounds. By the time they've flown nonstop about six hundred miles from west Texas or New Mexico, they're ready for a rest. Every year they stop along the Platte River valley. They choose places from Overton, west of Kearney, all the way to Grand Island. Here they spend a few weeks regaining energy and mingling with other cranes. At night they roost on sandbars in the river for safety. By day they eat. They need to refuel for the rest of their long journey. Sometimes they dance.

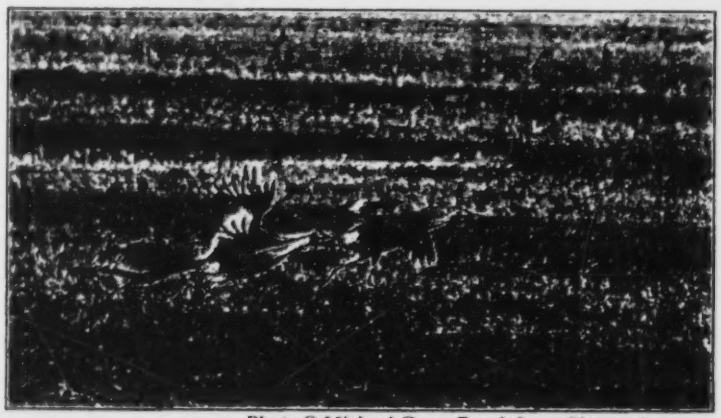

Photo © Michael Gore; Frank Lane Picture Agency

We arrive in the Kearney area in late afternoon. We leave the interstate to grab a quick snack at the gas station. Then we drive the back roads. Soon, among the cornstalks in a wintry-looking field, we see about fifty cranes. They are very large, gangly birds! Our field guide says greater sandhill cranes can be fifty inches tall. Wow! That's the height of an average second-grader. The cranes step through the stubble on long, spindly legs. Their feathers are grayish, some tinged with russet, and their tufty tails droop. They remind me of ostriches. Above their long beaks are bright red crown patches. The patches seem to glow in the late-afternoon slanted light. Through our binoculars, we can see that the patches are not feathery: they are bare skin!

We watch from the car. We don't want to disturb the cranes. This is their place. They act fidgety and they're quite noisy. Some are eating, gleaning leftover grain. Others are hustling and crowding each other.

Reading Sample Test Passage

One leaps into the air, flapping its wings, its spindly legs dangling. Then it lands again. Now two are leaping and flapping together. The excitement seems to be catching. Soon, more cranes are leaping and landing, flapping and squawking. It's quite a dance! Actually, it's only practice. The males and females are pairing up. They are jittery with spring fever. The really serious mating dances get going later, on the nesting grounds in the north. But this dance we are watching is wild and crazy enough.

As dusk falls, the cranes leave the field to join other flocks overhead. They mill around. It looks as if they are trying to decide something. After a while they all fly off toward the river. And then it's dark. Next morning, way before dawn, we bundle up to go and see the cranes at their nighttime roost. The chill cuts through all our layers of clothing. I have to scrunch my fingers inside my mittens and stick my hands deep in my pockets. My breath feels prickly and freezes in my nose. We hike to the river and out across it along an old railroad bridge. We can't use a light and we can't talk. We mustn't disturb the roosting birds. They roost on the smooth sandbars out in the river, but we can't see anything yet. It's pitch black. Every so often a spooky warbling sound echoes from the river. Before we can see the slightest hint of light in the eastern sky, the cranes begin to stir. We stir, too. We jump up and down on the spot, trying to warm our toes without making a noise. It is so cold that our breath huffs out like dragon breath. In the half-light we can see that the cranes are fussing now, fluffing up their feathers, preening, and drinking, their long beaks ladling up water, pointing skyward as the drink trickles down their skinny throats.

The noise and restlessness increase. Groups of cranes leap up from the sandbars and circle. Their weird gargling *garroooooooo* sounds are unearthly and spine-chilling. We shiver with nice fright as well as cold. More cranes join the ones flying until the sky seems full of huge wings and straggly, "undercarriage" legs. Then, as if they shared one brain, they flap away toward the flooded meadows.

A crane expert tells us there is a famous saying about the Platte River, that it is "mile wide and an inch deep, too thick to drink and too thin to plow." It does look brownish and thick-muddy. And it is quite wide where we walk. That's why the cranes like it here. The sandy islands are good roosts, safe from predators—especially since some of the cranes seem to act as "guard birds" all night. The expert says that long ago the river was wider than it is now. It used to flood often, washing away tree seedlings whose roots were trying to get a hold on the sandbars in the river channels. Now, people divert water from the river for farming. There are dams upstream. Without floods to wash away seedlings, tall willows and cottonwoods cover some islands. These places are no longer good crane habitat. The expert tells us cranes need shallow channels, bare sandbars and islands, and flooded meadows, where they can pick and peck to find worms and grubs. Most of all, the cranes need there to be enough water flowing to keep the Platte River a mile wide. A single, deep channel without sandbars is of no use to them.

It's light now, and all the cranes have left the sandbar roost. We drive the back roads some more, wanting to see the cranes dance again. By noon, it is even colder. An icy fog closes in and the snow begins to fall. We head home toward Denver, not wanting to be caught in a blizzard. Driving into the swirl of snow, we think about the cranes. We wonder how they'll do on their long, tough journey north through the still-wintry land ahead. We're glad they take their spring break in the Platte River valley, in areas set aside for them. Most of all, we're glad we got to see their most amazing river dance.

Previously appeared in *Stories from Where We Live: The Great North American Prairie*, ed. Sara Antoine (Milkweed Editions: Minneapolis, 2001.

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Reading Sample Test Questions

4 In paragraph 2, the author writes, "Away to the north, all we can see of the South Platte River is a snaking line of leafless cottonwoods." The author uses these words to show that the line of trees

A has snakes crawling all through the branches of the trees.

B looks like a snake's body winding back and forth as it crawls.

C is long and thin like a snake's body when it is stretched out.

D appears to be the color of a snake since the trees have no leaves.

5 In which book would this passage most likely be found?

A *Legends and Tales of the Central United States*

B *How to Attract Migrating Birds to Your Yard*

C *Facts about Rare and Endangered Birds*

D *Unusual Vacation Experiences for Bird Lovers*

6 In paragraph 6 the author writes, "It is so cold that our breath huffs out like dragon breath." This means that

A their breaths were noisy and could be heard a long way.

B their warm breaths felt like fire when they breathed.

C they had to take quick, deep breaths of cold air.

D they could see their breaths in the cold air.

7 In the passage, the word <u>stubble</u> means

A large sandhill crane nests.

B short, dry corn stalks.

C growing weeds and grasses.

D soft, white snow drifts.

8 This passage is mainly about

A the favorite foods of sandhill cranes.

B a family observing sandhill cranes in Nebraska.

C the nesting ground of sandhill cranes.

D some sandhill cranes flying from Texas to Nebraska.

Write your answer to Question 2 on page 3 of your Answer Booklet.

9 The passage "River Dance" tells about a special dance that sandhill cranes do.

Using details from the passage, **describe** in your own words the dance that the cranes do and **explain** why they do it.

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Reading Sample Test Passage

WHAT GOOD'S A THUMB?

(Passage unavailable – Web publishing rights denied.
Please refer to printed version.)

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Reading Sample Test Questions

10 Why does the author of the poem capitalize the letters in the word "AH-CHOO"?

A to show that it is a funny word

B to stress the loud sound a sneeze makes

C to show how good it feels to sneeze

D to show that the person may have a bad cold

11 The author suggests that a person with a sore thumb should

A use only one hand.

B just ignore the pain.

C get help from someone.

D do nothing at all.

12 Based on the poem, why would a person give the "thumbs up" sign?

A to send a glad message

B to make a sore thumb feel better

C to warn others about an upcoming sneeze

D to signal that help is needed

13 This poem is mainly about

A why cutting a steak is dangerous to your thumb.

B how to get people to do things for you.

C what to do if you need advice.

D how necessary a thumb is to you.

14 In stanza 5 of the poem, the author writes, "...you'll have to let her." The author means that you will have to let your mom

A help you find your sweater.

B sew on a button.

C hold a tissue to your nose.

D help you finish dressing.

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Reading Sample Test Passage

Leaf and Seed Bugs

**(Passage unavailable – Web publishing rights denied.
Please refer to printed version.)**

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Reading Sample Test Questions

15 This passage is mainly about

- **A** observing.
- **B** finding.
- **C** creating.
- **D** painting.

16 According to the passage, which of these should you do *first*?

- **A** Glue the main parts of the bug together.
- **B** Choose materials and arrange them to look like a bug.
- **C** Poke holes in the body parts for the straw legs.
- **D** Glue leaves onto the body to look like wings.

17 What is another good name for this passage?

- **A** "Bugs of the World"
- **B** "A Walk in the Woods"
- **C** "Leaf and Seed Collections"
- **D** "Odd Insect Originals"

18 This passage can be described as

- **A** the rules for a contest.
- **B** a shopping list.
- **C** an advertisement.
- **D** a set of instructions.

19 In the first sentence of the passage, the word <u>incredible</u> means

- **A** amazing.
- **B** ancient.
- **C** familiar.
- **D** common.

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Reading Sample Test Passage

When Money Grew on Trees

(Passage unavailable – Web publishing rights denied.
Please refer to printed version.)

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Reading Sample Test Questions

20 Before the Spaniards came, the Aztecs gave their rulers many cacao beans to purchase

A cacahuatl to drink.

B coins to carry.

C cacao trees for their orchards.

D protection for their families.

21 The author included the parts in the margins labeled "Note:" to help the reader

A know the meaning of difficult words and read the passage more slowly.

B pronounce words correctly and understand the passage better.

C see how the words are spelled and want to read the passage again.

D find words that are unusual and skip some parts of the passage.

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Reading Sample Test Questions

22 Wealthy Europeans craved the expensive drink "chocolate" because they

A had never seen it before.

B were able to use it as money.

C enjoyed the taste of it.

D liked the color of it.

23 Based on the passage, which of these is not an ingredient that the Europeans added to chocolate?

A nutmeg

B milk

C almonds

D mint

24 The passage says that money still grows on cacao trees today because

A candy companies sell a lot of chocolate.

B cacao trees can grow everywhere.

C the leaves of the cacao tree sparkle like coins.

D cacao beans can be used to buy chocolate.

25 Which other word in the next-to-last paragraph means the same as the word currency?

A beans

B food

C coins

D drink

Write your answer to Question 26 on page 4 of your Answer Booklet.

26 Using at least four details from the passage, explain how the use of cacao beans has changed over time.

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Reading Test Answer Key

Item Number	Reporting Category	Ability Level	Answer Key
1	C1	A1	B
2	C1	A1	C
3	C1	A1	D
4	C2	A2	B
5	C2	A3	D
6	C2	A2	D
7	C1	A2	B
8	C2	A2	B
9	C2	A2	CR*
10	C2	A3	B
11	C2	A1	C
12	C2	A2	A
13	C2	A2	D
14	C2	A2	D
15	C3	A2	C
16	C3	A1	B
17	C3	A1	D
18	C3	A2	D
19	C1	A2	A
20	C3	A3	D
21	C3	A3	B
22	C3	A2	C
23	C3	A1	D
24	C3	A2	A
25	C1	A1	C
26	C3	A2	CR*

* Indicates a constructed-response item. See the following pages for rubrics and sample responses.

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Reading Sample Test Questions

Rubric for Question 9 (*River Dance*):

Score Point	Expectation
3	Response completely and accurately describes the special dance the sandhill cranes do and thoroughly explains why they do this dance. The response includes sufficient and relevant details from the article.
2	Response describes the special dance the sandhill cranes do, and explains why they do the dance. The response includes some relevant details from the passage, but it may contain a few inaccuracies.
1	Response minimally describes the special dance the sandhill cranes do and/or gives some explanation of why they do the dance. The response is sparse and may contain numerous inaccuracies or misunderstandings about the passage. Few relevant details from the passage are provided.
0	Response is totally inaccurate and/or irrelevant, or there is no response.

Sample Response for Each Score Point:

3 – When the sandhill cranes are getting ready to do their special dance, some of them begin hustling around and crowding each other. Then just one or two cranes leap into the air and flap their wings. Soon many more cranes are jumping and flapping and landing again and making strange squawking sounds.

The cranes are nervous from spring fever and they do this dance to begin pairing up for mating. They are beginning to choose their mates and will finish dancing and pairing off when they complete their migration to the north.

2 – The sandhill cranes dance by jumping into the air and flapping their wings. They also squawk while they are doing it. They do it many times.

The cranes do this dance to pair up with each other and so they can fly north. Then they will dance again.

1 – The dance the cranes do makes them look crazy. They jump up and down and try to fly.

0 – The cranes dance because they are hurt. The dance shows how hurt they are.

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Rubric for Question 26 (*When Money Grew on Trees*):

Score Point	Expectation
3	Response thoroughly and accurately describes how the use of cacao beans has changed over time and is supported by sufficient and relevant information and details from the passage.
2	Response partially describes how the use of cacao beans has changed over time and is supported by some details from the passage. Response may contain some inaccuracies or misunderstandings from the passage.
1	Response is a minimal description of how the use of cacao beans has changed over time. Response may contain numerous inaccuracies or misunderstanding about the passage. Few details from the passage are provided.
0	Response is totally inaccurate and/or irrelevant, or there is no response.

Sample Response for Each Score Point:

3 – Many years ago, people who lived in Central America ate cacao beans. At that time the beans were only used as food. The beans became more and more valuable, and the Aztec people in Mexico started using the beans for money. They also ate the beans and began to make a drink called cacahuatl out of them, so the beans were being used for both food and money.

Many years later, when Cortés invaded Mexico, he saw that the beans were being used for money. He made the people grow many cacao trees and give him the beans so he could be rich. The Aztecs still drank cacahuatl, but the Spaniards didn't. Later, the Spaniards added sugar and other things to it and made chocolate, so the beans were still being used for both food and money. When the Spaniards in Mexico sent some of the beans to Spain, the Europeans added more things to the chocolate to make it taste better. The beans were only used as food in Europe, but they were still used as both food and money in America. Finally the Spanish Americans stopped using the beans for money also. Then the beans were used only as a food, and not as money, everywhere in the world.

2 – A long time ago people lived in forests in Central America and ate the cacao beans they found on trees. Then the beans started being used for money because they were worth more, and the Aztec rulers collected as many as they could. They started to buy stuff with the beans, so the beans became money to most people. Some people made a drink called cacahuatl. It didn't taste very good, but the people who drank it wanted the beans to be used mostly for food.

When Cortés came to Mexico, he conquered it. Since the beans were used for money, he wanted everybody to grow beans and give them to him. He wanted to be rich and to use them as money because he didn't like the taste of cacahuatl. Then the Spaniards put other things in the cacahuatl to make chocolate and used it as food too. When they sent some beans to Europe, those people really liked the chocolate. They never used the cacao beans as money. Then the Aztecs finally stopped using the beans as money and only used them as food.

Reading Sample Test Questions

1 – The people who found the first cacao beans ate them. Other people used the beans to buy rabbits. When the people made cacahuatl out of the beans it tasted bad, but they had to drink it anyway. So it was their food. ..

When Cortés came, he collected houses full of cacao beans so he was rich. Then he made chocolate and liked that. He sent some chocolate to his friends, and they liked it too. Nobody used it for money anymore because it tasted good.

0 – Cacao beans tasted bad. My mom never has any and that is good. But chocolate is good, and my mom gives it to us. How could anybody think chocolate is money? That is silly.

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Mathematics Introduction

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Mathematics Introduction

Students have different abilities, needs, and interests. Yet everyone needs to be able to use mathematics in his or her personal life, in the workplace, and in further study. All students deserve an opportunity to understand the power and beauty of mathematics. Students need to learn a new set of mathematics basics that enable them to compute fluently and to solve problems creatively and resourcefully.

— National Council of Teachers of Mathematics
http://www.nctm.org/standards/overview.htm

Comprehensive mathematical knowledge is essential for success in today's world. Society needs individuals who have sound estimation skills and number and spatial sense, who are competent using and interpreting data, and who can use appropriate technology resources to solve problems and make informed decisions. These skills are essential if students are to become successful citizens, life-long learners, and competitive workers in a global marketplace.

The goals of mathematics education in Nevada include the following:

- All students will have knowledge of basic mathematical facts and relationships and the ability to perform computations.
- All students will have the ability to make sound estimations and to make sense of number relationships.
- All students will have the ability to read, interpret, and create graphs, tables, and charts.
- All students will have the ability to make geometric observations, measurements, and constructions.
- All students will have the ability to understand the effective, appropriate, and efficient use of models and mathematical tools, including calculators and computer technology.

The Nevada Mathematics Standards provide the framework for a comprehensive K-12 mathematics program and are intended to guide curriculum, instruction, and assessment, as well as other policies and practices that affect student learning. The standards serve as a foundation for teachers and curriculum specialists as they create curriculum and adopt teaching practices relevant to the needs, strengths, and diversity of Nevada's students and communities. The standards also provide clear direction for meaningful pre-service and in-service professional development. In essence, the standards help Nevada's school districts build cohesive and comprehensive systems for ensuring that all students achieve at high levels.

On the following pages are the five content strands (Standards 1.0-5.0) and four process strands (Standards 6.0-9.0) in the Nevada Mathematics Standards. The process strands are carefully integrated within the content standards to emphasize their interconnectedness. This integration is meant to emphasize the importance of teaching mathematics within the context of an application so students will not only know important skills and content but also how to use their knowledge and skills to reason and solve problems. Listed below the five content strands are the performance indicators. A check mark indicates a performance indicator is assessed in the mathematics portion of the criterion referenced tests at grades 3 and 5. The performance indicators for the process strands are also assessed; however, they are not reported separately.

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Nevada Mathematics Standards and Progress Indicators

Standard 1: Numbers, Number Sense, and Computation

Students will develop their ability to solve problems, communicate, reason, and make connections within and beyond the field of mathematics. Students will accurately calculate and use estimation techniques, number relationships, operation rules, and algorithms. They will determine the reasonableness of answers and the accuracy of solutions.

Grade 3 Progress Indicators	Grade 5 Progress Indicators
By the end of Grade 3, students know and are able to do everything required in the previous grades and: ✔ Immediately recall and use addition, subtraction, and multiplication facts to 81. ✔ Add and subtract multi-digit numbers with regrouping. ✔ Generate and solve 2-step addition and subtraction and 1-step multiplication problems based on practical situations using pencil and paper, mental computation, and estimation. ✔ Add and subtract decimals using money as a model. • Model and explain multiplication, including as repeated addition. • Read, write, order, and compare numbers from 0-999; read and write number words. • Round to nearest tens and hundreds to determine reasonableness of the answer; read and write number words. ✔ Use, model, and identify place value positions up to 10,000. ✔ Model, sketch, and label fractions with denominators to 10; write fractions with numbers and words.	By the end of Grade 5, students know and are able to do everything required in the previous grades and: ✔ Use and apply multiplication and corresponding division facts through 12's. ✔ Generate and solve addition, subtraction, multiplication, and division problems using whole numbers in practical situations. ✔ Use order of operations to solve problems. ✔ Add and subtract decimals; multiply and divide decimals by whole numbers in problems representing practical situations. ✔ Multiply and divide multi-digit numbers by 2-digit numbers, including strategies for powers of 10. • Compare and order negative numbers within the context of everyday happenings (e.g., temperature) and plot those numbers on a number line. • When rounding, identify which place value will be most helpful in estimating an answer and determine the reasonableness of the answer. ✔ Use and identify place value. ✔ Use models and drawings to identify, compare, add, and subtract fractions with like denominators and to add and subtract decimals; use both to solve problems.

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Standard 2: Patterns, Functions, and Algebra

Students will develop their ability to solve problems, communicate, reason, and make connections within and beyond the field of mathematics. Students will use various algebraic methods to analyze, illustrate, extend, and create numerous representations (words, numbers, tables, and graphs) of patterns, functions, and algebraic relations as modeled in practical situations.

Grade 3 Progress Indicators	Grade 5 Progress Indicators
By the end of Grade 3, students know and are able to do everything required in the previous grades and: ✔ Recognize, describe, and create patterns using numbers; use number patterns and their extensions to solve problems. ✔ Identify missing terms and missing numbers in open number sentences involving number facts in addition and subtraction. ✔ Complete number sentences with the appropriate words and symbols for addition, subtraction, less than, greater than, and equal to (+, –, <, >, =).	By the end of Grade 5, students know and are able to do everything required in the previous grades and: • Identify, describe, and explain patterns and relationships in the number system (e.g., formed by triangular numbers, perfect squares, arithmetic and geometric sequences) using concrete materials, paper and pencil, and calculators. ✔ Using whole numbers as a replacement set, find possible solutions to such inequalities as $8 + 4 > n$. ✔ Use variables in open sentences and to describe simple functions and relationships. ✔ Generate number sequences given the first term and any basic computation rule (e.g., given a 4 and the rule of add 6, 10, 16, 22, 28, ...). • Solve simple equations using a variety of methods (e.g., inverse operations, mental math, and estimate and verify).

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Standard 3: Measurement

Students will develop their ability to solve problems, communicate, reason and make connections within and beyond the field of mathematics. Students will use appropriate tools and techniques of measurement to determine, estimate, record, and verify direct and indirect measurements.

Grade 3 Progress Indicators	Grade 5 Progress Indicators
By the end of Grade 3, students know and are able to do everything required in the previous grades and: ✔ Select and use appropriate units of measurement; measure to a required degree of accuracy, and record results. • Estimate and use measuring devices with standard and non-standard units to measure length, surface area, liquid volume, capacity, temperature, and weight, communicating the concepts of more, less, and equivalent. ✔ Read, write, and use money notation determining possible combinations of coins and bills to equal given amounts. ✔ Tell time to the nearest minute, using analog and digital clocks, and identify elapsed time.	By the end of Grade 5, students know and are able to do everything required in the previous grades and: ✔ Estimate measures of length, volume, capacity, quantity, and weight, communicating degree of accuracy needed and when a more precise measure is required. ✔ Determine totals and change due for monetary amounts in problem-solving situations. ✔ Communicate the difference between perimeter and area. ✔ Identify equivalent periods of time, including relationships between and among seconds, minutes, hours, days, months, and years (e.g., 60 sec = 1 min).

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Standard 4: Spatial Relationships and Geometry

Students will develop their ability to solve problems, communicate, and make connections within and beyond the field of mathematics. Students will identify, represent, verify, and apply spatial relationships and geometric properties.

Grade 3 Progress Indicators	Grade 5 Progress Indicators
By the end of Grade 3, students know and are able to do everything required in the previous grades and: ✔ Describe, sketch, compare, and contrast plane geometric figures. • Demonstrate and describe the motion (transformation) of geometric figures as a slide, rotation, or a flip. • Compare, contrast, sketch, model, and build two- and three-dimensional geometric figures and objects.	By the end of Grade 5, students know and are able to do everything required in the previous grades and: ✔ Draw and classify triangles, according to their properties; (e.g., right, scalene, obtuse, equilateral); identify and draw circles and parts of circles, describing the relationships between the various parts (e.g., central angle, arc, diameter). ✔ Identify shapes that have congruence, similarity, and/or symmetry of figures using a variety of methods including transformational motions (e.g., translation/slide, rotation/turn, reflection/flip, enlargement/reduction) and models, drawings, and measurement tools. ✔ Using a grid, identify coordinates for a given point or locate points of given coordinates in the first quadrant. ✔ Identify, describe, compare, and classify two- and three- dimensional figures by relevant properties including number of vertices (corners), edges, and shapes of faces; identify and predict the effects of combining, dividing, and changing shapes into other shapes. ✔ Identify, describe, define, and draw geometric figures including points, intersecting, perpendicular and parallel lines, line segments, rays, angles, and planes.

Standard 5: Data Analysis

Students will develop their ability to solve problems, communicate, reason, and make connections within and beyond the field of mathematics. They will collect, organize, display, interpret, and analyze data to determine statistical relationships and probability projections.

Grade 3 Progress Indicators	Grade 5 Progress Indicators
By the end of Grade 3, students know and are able to do everything required in the previous grades and: ✔ Collect, organize, display, and describe simple data using number lines, pictographs, bar graphs, and frequency tables. ✔ Use concepts of probability (e.g., impossible, likely, certain) to make predictions about future events.	By the end of Grade 5, students know and are able to do everything required in the previous grades and: ✔ Collect, organize, read, and interpret data using a variety of graphic representations including tables, line plots, stem-and-leaf plots, scatter plots, histograms; use data to draw and explain conclusions and predictions. ✔ Model and then compute measures of central tendency including mean, median, and mode. • Describe the limitations of various graph formats; select an appropriate type of graph to accurately represent the data and justify the selection.

The Nevada Criterion Referenced Tests

The Nevada Critierion Referenced Tests (CRT) in mathematics are designed to assess students' proficiency with respect to the 1998 Nevada K-12 Standards for Mathematics Education. A framework reference and an item specification matrix are used to guide the development of the Nevada CRT assessments. The framework and matrix are based on the commonality of the content and goals of the Nevada K-12 Standards for Mathematics Education, the National Assessment of Educational Progress (NAEP), and the National Council of Teachers of Mathematics (NCTM) Curriculum and Evaluation Standards for Mathematics. The Nevada CRT framework document is available for review on the Nevada Department of Education website at http://www.nde.state.nv.us.

The CRT Framework calls for assessment items in four mathematics content clusters based on the three cognitive ability domains suggested by the NAEP assessment framework (conceptual understanding, procedural knowledge, and problem-solving skills) and the priorities set forth in the Nevada K-12 Standards for Mathematics Education.

The following charts show the Ability Levels (Cognitive Domains) and Content Clusters that are reported on the mathematics assessments.

Ability Levels (Cognitive Domains)

A1 – Conceptual Understanding
A2 – Procedures
A3 – Problem Solving

Content Clusters

C1 – Numbers and Operations (Standard 1)
C2 – Algebra and Functions (Standard 2)
C3 – Measurement and Geometry (Standards 3 & 4)*
C4 – Data Analysis, Statistics and Probability (Standard 5)

*Approximately half of the items in Content Cluster 3 (C3) are from Standard 3 (Measurement) and the other half are from Standard 4 (Geometry).

To demonstrate conceptual understanding (A1), students should show that they are able to:

- Recognize, label, and generate examples and/or non-examples of concepts.
- Use and interrelate models, diagrams, manipulatives, and varied representations of mathematical concepts.
- Use and apply mathematical facts and definitions.
- Identify and apply principles (e.g., provide and recognize valid statements generalizing relationships among concepts in conditional form).
- Compare, contrast, and integrate related concepts and principles to the nature of the concepts and principles.
- Recognize, interpret, and apply the signs, symbols, and terms used to represent concepts.
- Interpret assumptions and relations involving concepts in mathematical settings.

To demonstrate procedural knowledge (A2), students should show that they are able to:

- Select and appropriately apply correct procedures.
- Verify or justify the correctness of a procedure using concrete models or symbolic methods.
- Extend or modify procedures to deal with factors inherent in problem settings.
- Apply numerical algorithms appropriately to specific mathematical situations or settings.
- Perform non-computational functions such as rounding and ordering.
- Describe why a particular procedure will give a correct answer for a problem in a specific context or defined situation.

To demonstrate problem-solving skills (A3), students should show that they are able to:

- Correctly apply their accumulated knowledge of Mathematics in new situations.
- Recognize and formulate problems.
- Determine the efficacy and relevance of data or information in problem-solving situations.
- Use combinations of strategies, data, models, and procedures to answer questions.
- Use reasoning in new settings.
- Judge the reasonableness and correctness of solutions.

The matrices that follow explain the configuration of the mathematics examinations at grades 3 and 5.

CRT Grade 3 Mathematics Examination Item Matrix

Content Cluster/ Ability Level (Cognitive Domain)	C1 Numbers and Operations (Standard 1)	C2 Algebra and Functions (Standard 2)	C3 Measurement and Geometry (Standards 3&4)*	C4 Data Analysis: Statistics & Probability (Standard 5)	Total Items	Percent
A1 Conceptual Understanding	5	4	5	4	18	40
A2 Procedures	4	3	3	2	12	27
A3 Problem Solving	5	2	5	3	15	33
Total Items	14	9	13	9	45	
Percent	31	20	29	20		100

*Approximately half of the items in Content Cluster 3 (C3) are from Standard 3 (Measurement) and the other half are from Standard 4 (Geometry).

CRT Grade 5 Mathematics Examination Item Matrix						
Content Cluster/ Ability Level (Cognitive Domain)	C1 Numbers and Operations (Standard 1)	C2 Algebra and Functions (Standard 2)	C3 Measurement and Geometry (Standards 3&4)*	C4 Data Analysis: Statistics & Probability (Standard 5)	Total Items	Percent
A1 Conceptual Understanding	5	4	5	4	18	40
A2 Procedures	4	2	3	2	11	24
A3 Problem Solving	4*	3	5	4*	16	36
Total Items	13	9	13	10	45	
Percent	29	20	29	22		100

* Indicates a constructed-response item.

Constructed-Response Items

Constructed-response items are included in the CRT mathematics test in grade five. Constructed-response items allow students to demonstrate their understanding of mathematics concepts using higher-level thinking skills. The items are written at the A2 and A3 ability levels, which require students to show *procedural* and *problem-solving* abilities. The student is asked to draw pictures and/or explain how they arrived at the answer to a question — something that cannot be done in a multiple choice question.

Students receive a score of 0-3 points on their answer, with 0 being the lowest and 3 being the highest. A score of 2 or 3 is deemed proficient. A student's score depends on how closely his or her answer matches the description in the item-specific rubric and the anchor papers for each constructed-response item.

For each constructed-response item, an item-specific rubric and anchor papers are used to guide the readers who score the students' responses. The item-specific rubric is used to select anchor papers. The anchor papers are actual student responses that are exemplary of the typical responses at each score point. The item-specific rubrics for mathematics items are developed from the general mathematics rubric on the following page.

Constructed-Response Scoring Rubric

Score Point	Expectation
3	The response completely answers all part of the question and displays thorough understanding of the skill(s) within the standard being tested. The response provides an answer that: • clearly and correctly indicates the mathematical ideas and processes applied and provides evidence of the problem-solving techniques and/or thinking skills used to solve the problem. • clearly and correctly labels all answers, if required.
2	The response partially, but adequately, answers the question and displays satisfactory understanding of the skill(s) being tested. The response provides an answer that: • correctly completes all parts of the task but contains minor flaws in the reasoning or a minor notational error in recording a solution to a part of the problem. • completes the entire task but uses incomplete, or disorganized information to represent the solution process and/or a problem solution.
1	The response demonstrates a limited understanding of the skill(s) being tested The response provides an answer that: • correctly solves the problem but does not provide clearly acceptable answers for the entire problem. • provides an acceptable response for one part of the question, but fails to attempt a solution for the other part(s) of the problem.
0	The response demonstrates a lack of understanding of the skill(s) being tested. The response provides an answer that: • does not answer the question clearly enough to demonstrate any understanding. • provides incorrect or inappropriate responses to the question.

Grade 3 Mathematics

Review Materials

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Grade 3 Mathematics

Reporting Category: C1 – Numbers and Operations

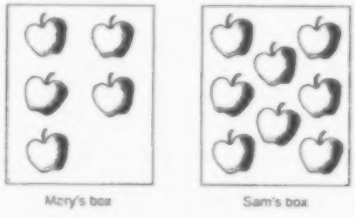
Ability Level: A1 – Conceptual Understanding

This item assesses the student's ability to **use and apply facts and definitions.**

Performance Indicator: Immediately recall and use addition, subtraction, and multiplication facts to 81.

Test Item:

The pictures below show the number of apples Mary and Sam each picked from a tree and put into a box.



How many more apples did Sam pick than Mary?

A 3 apples

B 5 apples

C 8 apples

D 13 apples

Correct Response A: The student should be able to recall subtraction facts.
Sam has 8 apples.
Mary has 5 apples.
8 – 5 = 3 apples.

Response B: This response is incorrect. It represents an error in which the student may have not known the subtraction fact correctly or may have counted the apples in Mary's box and given that as the correct answer.

Response C: This response is incorrect. It represents an error in which the student may have not known the subtraction fact correctly or may have counted the apples in Sam's box and given that as the correct answer.

Response D: This response is incorrect. It represents an error in which the student may have decided this was an addition problem and used the addition fact 5 + 8 = 13.

Grade 3 Mathematics

Reporting Category: C1 – Numbers and Operations

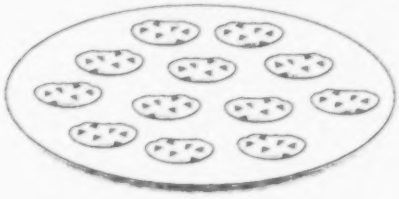
Ability Level: A2 – Procedural Skills

This item assesses the student's ability to **apply numerical algorithms appropriately to specific mathematical situations or settings.**

Performance Indicator: Model, sketch, and label fractions with denominators to 10; write fractions with numbers and words.

Test Item:

What number is $\frac{1}{3}$ of the cookies on this plate?



A 3

B 4

C 6

D 12

Correct Response B: The student should understand that one-third means one out of every three. There are 3 groups of 4 cookies (or 12 cookies) on the plate. Therefore, one group of cookies out of 3 groups of cookies is equivalent to 4 cookies.

Response A: This response is incorrect. It represents an error in which the student found one-fourth of the cookies on the plate.

Response C: This response is incorrect. It represents an error in which the student found one-half of the cookies on the plate.

Response D: This response is incorrect. It represents an error in which the student found the total number of cookies on the plate.

Grade 3 Mathematics

Reporting Category: C1 – Numbers and Operations

Ability Level: A3 – Problem Solving

This item assesses the student's ability **to judge the reasonableness and correctness of solutions.**

Performance Indicator: Generate and solve two-step addition and one-step multiplication problems based on practical situations using pencil and paper, mental computation, and estimation.

Test Item:

Miguel bought a game for \$3.74, and a ball for \$2.03. How much money, **rounded to the nearer dollar**, did he spend?

A \$2.00

B \$4.00

C \$5.00

D \$6.00

Correct Response D: The student should be able to round the prices to the nearer dollar before finding the sum.

\$3.74 rounds up to \$4.00 and \$2.03 rounds down to \$2.00.
Then, \$4.00 + \$2.00 = \$6.00.

Response A: This response is incorrect. It represents an error in which the student may have rounded only one price.

\$2.03 ≈ \$2.00.

Response B: This response is incorrect. It represents an error in which the student may have rounded only one price.

\$3.74 ≈ \$4.00.

Response C: This response is incorrect. It represents an error in which the student may have rounded both prices down to the next dollar so that

\$3.00 + \$2.00 = \$5.00.

Grade 3 Mathematics

Reporting Category: C2 – Algebra and Functions

Ability Level: A1 – Conceptual Understanding

This item assesses the student's ability to **use and apply facts and definitions.**

Performance Indicator: Identify missing terms and missing numbers in open number sentences involving number facts in addition and subtraction.

Test Item:

What number makes this number sentence true?

23 + □ = 57

A 23
B 34
C 40
D 80

Correct Response B: The student should be able to apply the subtraction algorithm for two-digit numbers in this question.

57 – 23 = 34

Response A: This response is incorrect. It represents an error in which the student may have selected a number that appears within the question itself.

Response C: This response is incorrect. It represents an error in which the student may have rounded 57 to 60 and 23 to 20, and then found the difference.

60 – 20 = 40

Response D: This response is incorrect. It represents an error in which the student may have found the sum of 57 and 23.

57 + 23 = 80

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Grade 3 Mathematics

Reporting Category: C2 – Algebra and Functions

Ability Level: A2 – Procedural Skills

This item assesses the student's ability to **verify or justify the correctness of a procedure using concrete models or symbolic methods.**

Performance Indicator: Complete number sentences with the appropriate words and symbols for addition, subtraction, less than, greater than, and equal to (+, –, <, >, =).

Test Item:

Which symbol below should go in the box to make this number sentence true?

20 – 17 ☐ 10 – 7

A +

B >

C <

D =

Correct Response D: The student should know the subtraction algorithm and subtraction facts and be able to relate those facts by using the appropriate symbol.

20 – 17 = 3 and 10 – 7 = 3 and 3 = 3
Therefore, 20 – 17 = 10 – 7.

Response A: This response is incorrect. It represents an error in which the student chose a symbol that does not create a number sentence. The + symbol just adds a third operation to the two existing operations.

Response B: This response is incorrect. It represents an error in which the student believes that 20 – 17 is greater than 10 – 7 or does not know the meaning of the symbol.

Response C: This response is incorrect. It represents an error in which the student believes that 20 – 17 is less than 10 – 7 or does not know the meaning of the symbol.

Grade 3 Mathematics

Reporting Category: C2 – Algebra and Functions

Ability Level: A3 – Problem Solving

This item assesses the student's ability to **use reasoning in new settings.**

Performance Indicator: Recognize, describe, and create patterns using numbers; use number patterns and their extensions to solve problems.

Test Item:

Which rule below **best** describes this skip counting pattern?

100, 95, 90, 85, 80, 75, 70, 65,...

A Add 5 to each number to get the next number.

B Subtract 5 from each number to get the next number.

C Multiply each number by 5 to get the next number.

D Divide each number by 5 to get the next number.

Correct Response B: The student should be able to recognize and describe with words the pattern shown in the question. Each number after the first number is 5 less than the preceding number.

Response A: This response is incorrect. It represents an error in which the student may have read the number pattern from right to left or misunderstood the difference between the operations of addition and subtraction.

Response C: This response is incorrect. It represents an error in which the student may have misunderstood the difference between the operations of subtraction and multiplication.

Response D: This response is incorrect. It represents an error in which the student may have misunderstood the difference between the operations of subtraction and division.

Grade 3 Mathematics

Reporting Category: C3 – Measurement and Geometry

Ability Level: A1 – Conceptual Understanding

This item assesses the student's ability to **compare, contrast, and integrate related concepts and principles.**

Performance Indicator: Select and use appropriate units of measurement; measure to a required degree of accuracy, and record results.

Test Item:

Which list shows the units below, in order from the largest to smallest unit?

pint, gallon, cup, quart

A cup, quart, gallon, pint

B cup, pint, quart, gallon

C gallon, quart, pint, cup

D gallon, pint, cup, quart

Correct Response C: The student should understand the concepts of more than (and less than) in the context of common units of measurement for the volume of a liquid.

The volume of a gallon is more than the volume of a quart, which is more than the volume of a pint, which is more than the volume of a cup.

Response A: This response is incorrect. It represents an error in which the student may not understand the relative sizes of the different units.

Response B: This response is incorrect. It represents an error in which the student may have ordered the units from smallest to largest.

Response D: This response is incorrect. It represents an error in which the student may not understand the relative sizes of the different units.

Grade 3 Mathematics

Reporting Category: C3 – Measurement and Geometry

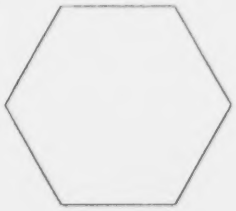
Ability Level: A2 – Procedural Skills

This item assesses the student's ability to **construct and deconstruct geometric shapes.**

Performance Indicator: Describe, sketch, compare, and contrast plane geometric figures.

Test Item:

Which pair of shapes below could you put together without overlapping to make this shape?



A

B

C

D

Correct Response C: The student should be able to visualize and build a two-dimensional geometric figure from other two-dimensional geometric figures. The two trapezoids shown, when aligned on their longest sides, form the regular hexagon shown at the top of the question.

Response A: This response is incorrect. The two shapes shown can be put together to make a triangle or a parallelogram, but not a regular hexagon.

Response B: This response is incorrect. The two shapes shown can be put together to make a rhombus, but not a regular hexagon.

Response D: This response is incorrect. The two shapes shown can be put together to make a composite shape, but not a regular hexagon.

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Grade 3 Mathematics

Reporting Category: C3 – Measurement and Geometry

Ability Level: A3 – Problem Solving

This item assesses the student's ability to **use combinations of strategies, data, models, and procedures to answer questions.**

Performance Indicator: Tell time to the nearest minute, using analog and digital clocks, and identify elapsed time.

Test Item:

A movie started at 7:15 PM. It lasted 1 hour and 45 minutes. At what time did the movie end?

A 9:15 PM

B 9:00 PM

C 8:45 PM

D 8:15 PM

Correct Response B: The student should be able to add hours and minutes to arrive at the time the movie ended.

7:15 + 1 hour and 45 minutes = 8:60 = 9:00

Response A: This response is incorrect. It represents an error in which the student may have rounded or mistaken 1 hour and 45 minutes for 2 hours. Then, 7:15 + 2 = 9:15.

Response C: This response is incorrect. It represents an error in which the student may not have included the 15 minutes from the 7:15 when finding the time the movie ended.

Response D: This response is incorrect. It represents an error in which the student may not have included 45 minutes from the 1 hour and 45 minutes when finding the time the movie ended.

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Grade 3 Mathematics

Reporting Category: C4 – Data Analysis and Probability

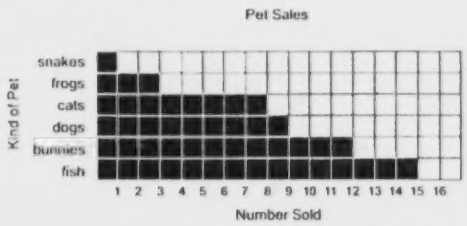
Ability Level: A1 – Conceptual Understanding

This item assesses the student's ability to **use and interrelate models, diagrams, manipulatives, and varied representations of mathematical concepts.**

Performance Indicator: Collect, organize, display, and describe simple data using number lines, pictographs, bar graphs, and frequency tables.

Test Item:

The graph shows how many different pets were sold at Percy's Pet Store on a given day.



How many **bunnies** were sold?

A 5

B 11

C 12

D 15

Correct Response C: The student should be able to read data presented in the graph. Moving from left to right starting in the row labeled "bunnies" there are 12 boxes shaded. Each of those boxes represents one bunny sold. Therefore, 12 bunnies were sold.

Response A: This response is incorrect. It represents an error in which the student may have counted 5 unshaded boxes from right to left in the row labeled "bunnies."

Response B: This response is incorrect. It represents an error in which the student may have misread the number of shaded boxes.

Response D: This response is incorrect. It represents an error in which the student may have misread the label for kinds of pets and simply chosen the largest number.

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Grade 3 Mathematics

Reporting Category: C4 – Data Analysis and Probability

Ability Level: A2 – Procedural Skills

This item assesses the student's ability to **verify or justify the correctness of a procedure using concrete models or symbolic methods.**

Performance Indicator: Collect, organize, display, and describe simple data using number lines, pictographs, bar graphs, and frequency tables.

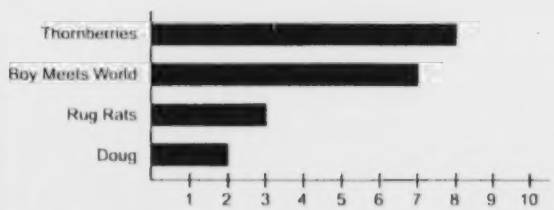
Test Item:

The students in Ms. Gomez's class tallied their favorite TV shows in the chart below.

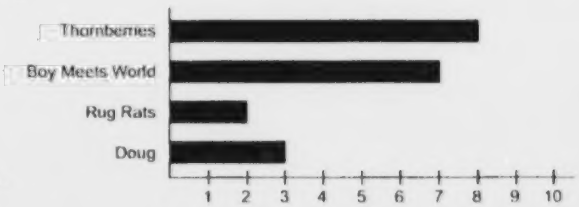
Thornberries	𝍸 III
Boy Meets World	𝍸 II
Rug Rats	III
Doug	II

Which bar graph below correctly shows the students' choices?

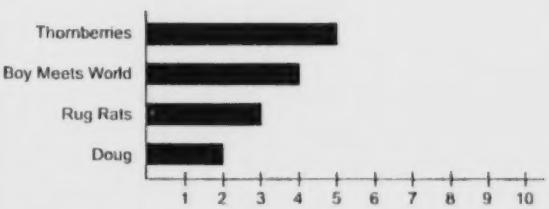
A



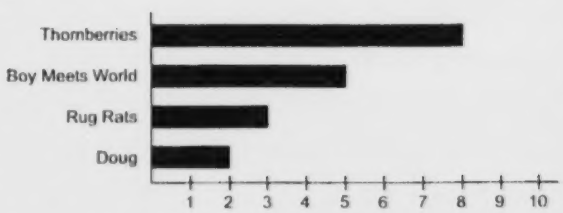
C



B



D



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Correct Response A: The student should be able to recognize data displayed accurately in more than one format.

8 students voted for the *Thornberries*.
7 students voted for *Boy Meets World*.
3 students voted for *Rug Rats*.
2 students voted for *Doug*.
These numbers match the numbers in the tally chart.

Response B: This response is incorrect. It represents an error in which the length of each bar is merely one less than the bar above it.

Response C: This response is incorrect. It represents an error in which the correct lengths of the bars for *Rug Rats* and *Doug* were reversed.

Response D: This response is incorrect. It represents an error in which the lengths of the bars in the graph do not match the numbers of students in the tally chart for *Boy Meets World*.

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Grade 3 Mathematics

Reporting Category: C4 – Data Analysis and Probability

Ability Level: A3 – Problem Solving

This item assesses the student's ability to **correctly apply their accumulated knowledge of mathematics in new situations.**

Performance Indicator: Use concepts of probability (e.g., impossible, likely, certain) to make predictions about future events.

Test Item:

Manuel, Dominique, Chase, and Roberta each have a different spinner.

Which student's spinner is **least likely** to land on Y?

A Manuel's

B Dominique's

C Chase's

D Roberta's

Correct Response D: The student should understand that the probability of landing on a Y is related to the area of the section(s) of the spinner labeled Y. The less the total area of a spinner labeled Y the less likely the spinner will land on Y.

The area of the section of Roberta's spinner labeled Y appears to cover about one-fourth (or 25%) of the total area of her spinner. The area of the section labeled Y on the other three spinners appears to cover an area greater than one-fourth of each of those spinners. Therefore, Roberta's spinner is least likely to land on Y.

Response A: This response is incorrect. The area covered by the section labeled Y on Manuel's spinner appears to be about one-half of the total area of the spinner. Therefore Manuel's spinner is the most likely to land on Y.

Response B: This response is incorrect. The area covered by the section labeled Y on Dominique's spinner appears to be about one-third of the total area of the spinner.

Response C: This response is incorrect. The area covered by the section labeled Y on Chase's spinner appears to be more than one-fourth of the total area of the spinner.

Mathematics Sample Test Questions

1 Which drawing below correctly represents one-fourth?

A

B

C

D

2 What number should go in the box to make this number sentence true?

243 + ☐ = 561

A 218

B 222

C 318

D 322

3 Jim bought **7 packs** of gum. There were **8 sticks** of gum in each pack. How many **sticks** of gum did Jim buy?

A 15

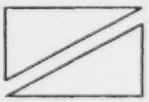
B 16

C 56

D 78

4 Which pair of figures below appears to be congruent?

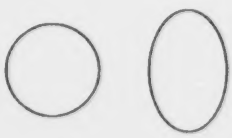
A



B

C

D



5 Which is the best ESTIMATE for the problem

67 - 29 = ☐ ?

A 20

B 30

C 40

D 50

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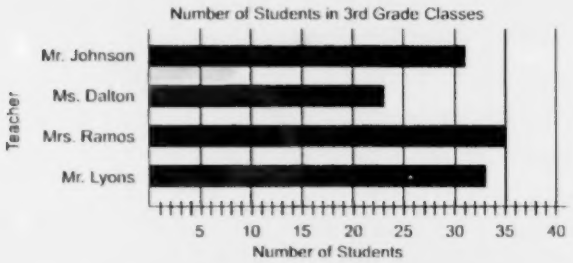
6 Which statement below is true for this graph?



A Mrs. Ramos has 35 more students than Mr. Johnson.

B Mr. Johnson has 12 more students than Ms. Dalton.

C Ms. Dalton has 2 less students than Mr. Lyons.

D Mr. Johnson has 2 less students than Mr. Lyons.

7 At his work, Mr. Brown puts wheels on new tricycles. How many wheels would he need for six tricycles? Use the table below to help you.

Number of Tricycles	1	2	3	4	5	
Number of Wheels	3	6	9	12	?	?

A 15

B 16

C 18

D 21

8

What time is shown on the clock?

A 4:41

B 5:41

C 8:23

D 8:25

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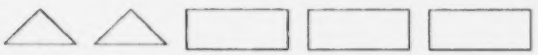
Mathematics Sample Test Questions

9 Look at the drawing of a triangular prism below.

Which set of pictures shows all the faces of the triangular prism?

A



B

C

D

10 Jill opened four bags of candies to find how many of each color she had. Use the table to answer this question.

Number of Candies in Each Bag

color / Bag	yellow	orange	green	blue	brown	red
A	9	4	5	5	20	13
B	7	8	9	7	19	8
C	10	5	7	4	19	12
D	7	8	2	6	23	13

What is the total number of candies in **Bag C**?

A 55

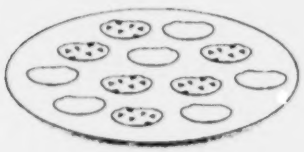
B 57

C 67

D 75

Mathematics Sample Test Questions

11 There are 12 cookies on the plate below. Six of the cookies are chocolate chip. What fraction of the total cookies on the plate are chocolate chip?



A $\frac{3}{12}$

B $\frac{1}{3}$

C $\frac{2}{6}$

D $\frac{6}{12}$

12 Which symbol should go in the circle to make this number sentence true?

78 ◯ 21 = 99

A +

B −

C >

D <

13 Which number phrase shows how many eyes 8 dogs should have?

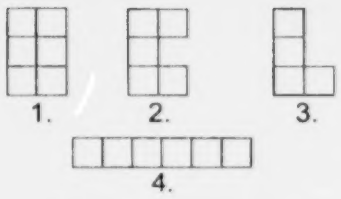
A 2 × 4

B 2 × 8

C 8 + 2

D 8 + 4

14



Which two shapes shown above have the same area?

A shapes 1 and 3

B shapes 1 and 4

C shapes 2 and 3

D shapes 2 and 4

15 Don has twelve frozen fruit bars in his freezer. Three of the bars are raspberry-flavored, two are strawberry-flavored, five are orange-flavored, and the rest are lemon-flavored. Which describes how likely it would be for Don to randomly select a lemon-flavored bar from the freezer on his first try?

A certain

B very likely

C not likely

D impossible

Mathematics Test Answer Key

Item Number	Reporting Category	Ability Level	Answer Key
1	C1	A2	B
2	C2	A1	C
3	C1	A3	C
4	C3	A1	A
5	C1	A2	C
6	C4	A3	D
7	C2	A3	C
8	C3	A1	A
9	C3	A3	A
10	C2	A1	B
11	C1	A2	D
12	C4	A1	A
13	C1	A1	B
14	C3	A2	B
15	C4	A3	C

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Grade 5 Mathematics

Review Materials

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Grade 5 Mathematics

Reporting Category: C1 – Numbers and Operations

Ability Level: A1 – Conceptual Understanding

This item assesses the student's ability to **recognize, interpret, and apply the signs, symbols, and terms used to represent concepts.**

Performance Indicator: Use and identify place value.

Test Item:

Which number is the standard form of four hundred seventy-eight thousand, six hundred eight?

A 400,078,608

B 4,780,680

C 478,680

D 478,608

Correct Response D: The student should have knowledge of place value and be able to convert the words that represent numbers into the standard form of a number.

Four hundred thousand = 400,000
Seventy thousand = 70,000
Eight thousand = 8,000
Six hundred = 600
Eight = 8
400,000 + 70,000 + 8,000 + 600 + 8 = 478,608

Response A: This response is incorrect. It represents an error in which the student may have confused four hundred million for four hundred thousand.

Response B: This response is incorrect. It represents an error in which the student may have confused four million seven hundred eighty thousand for four hundred seventy-eight thousand and confused six hundred eighty for six hundred eight.

Response C: This response is incorrect. It represents an error in which the student may have confused six hundred eighty for six hundred eight.

Grade 5 Mathematics

Reporting Category: C1 – Numbers and Operations

Ability Level: A2 – Procedural Skills

This item assesses the student's ability to **select and apply appropriate procedures.**

Performance Indicator: Use order of operations to solve problems.

Test Item:

What is the value of the expression below?

$24 - 3 \times 2 + 21 \div 7$

A 9

B 21

C 45

D 69

Correct Response B: The student should know and apply the order of operations to get the correct answer.

First: $24 - 6 + 21 \div 7$ (6 is the product of 3 and 2)
Next: $24 - 6 + 3$ (3 is the quotient of 21 and 7)
Next: $18 + 3$ (18 is the difference between 24 and 6)
Finally: 21 (21 is the sum of 18 and 3)

Response A: This response is incorrect. It represents an error in which the student may have performed the four operations starting from left to right in the sequence written.

Response C: This response is incorrect. It represents an error in which the student may have done the first three operations from left to right in the sequence written to get 42 and then found the sum of 42 and $(21 \div 7)$. Therefore $42 + 3 = 45$.

Response D: This response is incorrect. It represents an error in which the student may have divided the product of 21 and 23 by 7.

Grade 5 Mathematics

Reporting Category: C1 – Numbers and Operations

Ability Level: A3 – Problem Solving

This item assesses the student's ability to **recognize and formulate problems.**

Performance Indicator: Use models and drawings to identify, compare, add, and subtract fractions with like denominators and to add and subtract decimals; use both to solve problems.

Test Item:

On Sunday, 0.5 inches of snow fell. On Monday, 1.3 inches of snow fell. How much **more** snow fell on Monday than on Sunday?

A 0.2 inches

B 0.8 inches

C 1.2 inches

D 1.8 inches

Correct Response B: The student should recognize that this problem involves finding the difference between the amount of snow that fell on Monday and the amount of snow that fell on Sunday.

$$1.3 - 0.5 = 0.8$$

Response A: This response is incorrect. It represents an error in which the student may have found the difference between 0.5 and 0.3.

Response C: This response is incorrect. It represents an error in which the student may have found the difference between 0.5 and 0.3 and then added 1.

Response D: This response is incorrect. It represents an error in which the student may have found the sum of 1.3 and 0.5.

Grade 5 Mathematics

Reporting Category: C1 – Numbers and Operations

Ability Level: A3 – Problem Solving

This item assesses the student's ability to **correctly apply accumulated knowledge of mathematics in new situations.**

Performance Indicator: Add and subtract decimals; multiply and divide decimals by whole numbers in problems representing practical situations.

Test Item:

Write your answer to Question 3 on page 4 of your Answer Booklet. Be sure to answer Parts A, B, and C.

Scotty went to the post office. He bought three books of 20 first class stamps and 50 postcards. First class stamps cost $0.37 each.

A What is the total cost of the first class stamps Scotty bought? Show your work or explain how you got your answer.

B If the 50 postcards cost $11.50, what is the cost of one postcard? Show your work or explain how you got your answer.

C Find the total cost of the items Scotty bought. Show your work or explain how you got your answer.

Complete and Correct Response (similar to the following):

Part A: $22.20

Work:

First find the total number of first class stamps Scotty bought.
3 books × 20 stamps per book = 60 first class stamps
Then find the total cost of the 60 stamps.
60 stamps × $0.37 per stamp = $22.20

Part B: $0.23

Work:

If 50 postcards cost $11.50 then divide to find the cost of one postcard.
$11.50 ÷ 50 = $0.23

Part C: $33.70

Work:

To find the total cost of the items Scotty bought, find the sum of the cost of all the first-class stamps and the cost of all the postcards.
$22.20 + $11.50 = $33.70

Score Point	Description
3	Student gives correct answer to Parts A, B, and C and shows appropriate work.
2	Student gives correct answer to any two parts and shows appropriate work. OR Student gives correct answer to all parts but does not show any appropriate work. (Student shows understanding of the problem, but makes minor computational errors.)
1	Student gives correct answer to Part A or B only and shows appropriate work for that part. (Student demonstrates minimal understanding of the problem.)
0	Student's response is totally incorrect or irrelevant.

Grade 5 Mathematics

Reporting Category: C2 – Algebra and Functions

Ability Level: A1 – Conceptual Understanding

This item assesses the student's ability to **identify and apply principles (e.g., provide and recognize valid statements generalizing relationships among concepts in conditional form).**

Performance Indicator: Generate number sequences given the first term and any basic computation rule (e.g., given a 4 and the rule of add 6, 10, 16, 22, 28...).

Test Item:

Tom used 1 as the first number in a sequence. After the first number, the numbers form a geometric pattern. If the sequence continues in the same way, what should be the next two numbers?

1, 3, 9, 27, __, __

A 33, 39

B 36, 45

C 45, 63

D 81, 243

Correct Response D: The student should be able to recognize the rule used in the pattern is "multiply by 3." Then, $27 \times 3 = 81$ and, $81 \times 3 = 243$.

Response A: This response is incorrect. It represents an error in which the student may have thought the rule was "add 6."

Response B: This response is incorrect. It represents an error in which the student may have thought the rule was "add 9."

Response C: This response is incorrect. It represents an error in which the student may have thought the rule was "add 18."

Grade 5 Mathematics

Reporting Category: C2 – Algebra and Functions

Ability Level: A2 – Procedural Skills

This item assesses the student's ability to **extend or modify procedures to deal with factors inherent in problem settings.**

Performance Indicator: Using whole numbers as a replacement set, find possible solutions to such inequalities as $8 + 4 > n$.

Test Item:

Which is the **smallest** whole number that can be used in place of n to make the inequality below true?

$18 + n > 24$

A 5

B 6

C 7

D 8

Correct Response C: The student should understand the meaning of the inequality symbol for "greater than."

$18 + 7 > 24$ then, $25 > 24$

Response A: This response is incorrect. It represents an error in which the student may have misunderstood the meaning of the symbol for "greater than" or found an incorrect sum for $18 + 5$.

Response B: This response is incorrect. It represents an error in which the student may have misunderstood the meaning of the symbol for "greater than" or found an incorrect sum for $18 + 6$.

Response D: This response is incorrect. It represents an error in which the student did not choose the *smallest* whole number to replace n that would make the inequality true.

Grade 5 Mathematics

Reporting Category: C2 – Algebra and Functions

Ability Level: A3 – Problem Solving

This item assesses the student's ability to **correctly apply their accumulated knowledge of mathematics in new situations.**

Performance Indicator: Use variables in open sentences to describe simple functions and relationships.

Test Item:

Emilio planned to buy some paperback books at the book fair. The books cost $4.25 each. Which number phrase can be used to show the total cost in dollars of b books?

A $b + 4.25$

B $4.25 \times b$

C $b - 4.25$

D $4.25 \div b$

Correct Response B: The student should understand that the product of b, the number of books bought, and $4.25, the cost per book, will give the total cost.

Response A: This response is incorrect. It represents an error in which the student chose the sum of $4.25 and the number of books to get the total cost.

Response C: This response is incorrect. It represents an error in which the student chose the difference between the number of books and $4.25 to get the total cost.

Response D: This response is incorrect. It represents an error in which the student chose the quotient of $4.25 and the number of books to get the total cost.

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Grade 5 Mathematics

Reporting Category: C3 – Measurement and Geometry

Ability Level: A1 -- Conceptual Understanding

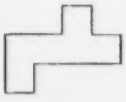
This item assesses the student's ability to **recognize, label, and generate examples and/or non-examples of concepts.**

Performance Indicator: Identify shapes that have congruence, similarity, and/or symmetry of figures using a variety of methods, including transformational motions (e.g., translation/slide, rotation/turn, reflection/flip, enlargement/reduction) and models, drawings, and measurement tools.

Test Item:

Which shape appears congruent to the shape drawn below?

A



B

C

D

Correct Response B: The student should understand the concept of congruency. The two geometric shapes are congruent because they have the same size and shape.

Responses A, C, and D: These responses are incorrect. They represent errors in which the student may not understand the concept of congruency. The shapes shown are not the same size and shape as the original shape.

Grade 5 Mathematics

Reporting Category: C3 – Measurement and Geometry

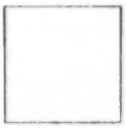
Ability Level: A2 – Procedural Skills

This item assesses the student's ability to **apply numerical algorithms appropriately to specific mathematical situations or settings.**

Performance Indicator: Communicate the difference between perimeter and area.

Test Item:

Find the perimeter, in feet, of the square shown below.



12 feet

A 24 feet

B 48 feet

C 96 feet

D 144 feet

Correct Response B: The student should understand the concept of perimeter and be able to apply an algorithm for finding the perimeter of a square. The perimeter is the distance around a geometric shape.

Perimeter of a square = side length + side length + side length + side length = 12 + 12 + 12 + 12 = 48 feet
Perimeter of a square = 4 × side length = 4 × 12 = 48 feet

Response A: This response is incorrect. It represents an error in which the student may have added the length of only two sides of the square.

Response C: This response is incorrect. It represents an error in which the student may have incorrectly multiplied the length of one side of the square by the length of another side of the square.

Response D: This response is incorrect. It represents an error in which the student may have found the area of the square by finding the product of 12 and 12.

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Grade 5 Mathematics

Reporting Category: C3 – Measurement and Geometry

Ability Level: A3 – Problem Solving

This item assesses the student's ability to **use reasoning in new settings.**

Performance Indicator: Determine totals and change due for monetary amounts in problem-solving situations.

Test Item:

Donna and Dan combined their money to buy a gift and a cake for a friend's birthday. Donna had $13.25 and Dan had $15.75. If they spent $16.95 for a gift, how much money should they have left to buy the cake?

A $12.05

B $12.15

C $13.00

D $13.95

Correct Response A: The student should be able to reason that the difference between the sum of Donna's and Dan's money and the amount spent on a gift is the amount left.

$13.25 + $15.75 = $29.00, then $29.00 – $16.95 = $12.05

Response B: This response is incorrect. It represents an error in which the student may have performed the operation of subtraction incorrectly.

Response C: This response is incorrect. It represents an error in which the student may have rounded $29.00 to $30.00 and rounded $16.95 to $17.00 and then found the difference.

Response D: This response is incorrect. It represents an error in which the student may have performed the operation of subtraction incorrectly.

Grade 5 Mathematics

Reporting Category: C4 – Data Analysis and Probability

Ability Level: A1 – Conceptual Understanding

This item assesses the student's ability to **recognize, label, and generate examples and/or non-examples of concepts.**

Performance Indicator: Model and then compute measures of central tendency, including mean, median, and mode.

Test Item:

The number of goals Cece's soccer team scored in each of the 11 games played this season are shown below.

0, 2, 0, 1, 0, 2, 1, 3, 2, 2, 1

What is the mode of the number of goals scored per game by the team?

A 0

B 1

C 2

D 3

Correct Response C: The student should be able to recognize the mode of a set of data. The mode is the score that appears most often in the data set. In this case the number 2 appears the greatest number of times in the data set (four times).

Response A: This response is incorrect. It represents an error in which the student may have chosen the lowest score.

Response B: This response is incorrect. It represents an error in which the student may have chosen the median of the scores.

Response D: This response is incorrect. It represents an error in which the student may have chosen the highest score or the range of the scores.

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Grade 5 Mathematics

Reporting Category: C4 – Data Analysis and Probability

Ability Level: A2 – Procedural Skills

This item assesses the student's ability to **perform non-computational functions such as rounding and ordering.**

Performance Indicator: Model and then compute measures of central tendency, including mean, median, and mode.

Test Item:

The math test scores in Ms. Smith's second period class are shown below.

80%, 95%, 84%, 62%, 86%, 95%, and 72%

What is the median test score?

A 62%

B 80%

C 84%

D 95%

Correct Response C: The student should be able to order the test score data from least to greatest and then select the median or middle score from the ordered data.

When ordered from least to greatest the scores are as follows:
62%, 72%, 80%, 84%, 86%, 95%, 95%,
The middle or median score is the fourth score from either end, which is 84%.

Response A: This response is incorrect. It represents an error in which the student may have chosen the lowest score or the middle score based on the order the scores were presented in the problem.

Response B: This response is incorrect. It represents an error in which the student may have incorrectly tried to find the mean of the test scores.

Response D: This response is incorrect. It represents an error in which the student may have chosen the mode of the scores, the score that appears most often.

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Grade 5 Mathematics

Reporting Category: C4 – Data Analysis and Probability

Ability Level: A3 – Problem Solving

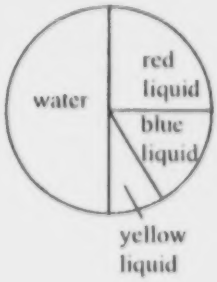
This item assesses the student's ability to **judge the reasonableness and correctness of solutions.**

Performance Indicator: Collect, organize, read, and interpret data using a variety of graphic representations, including tables, line plots, stem-and-leaf plots, scatter plots, histograms; use data to draw and explain conclusions and predictions.

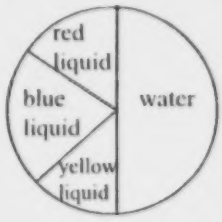
Test Item:

In science class, Jason made a mixture using 50% water, 25% red liquid, 20% blue liquid, and 5% yellow liquid. Which circle graph below best shows the mixture in its correct proportions?

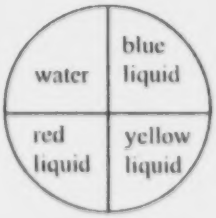
A



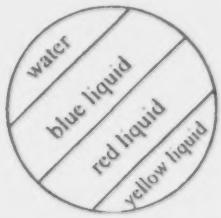
C



B



D



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Correct Response A: The student should understand how to read a circle graph. The half section of the circle labeled "water" represents 50% water. The quarter section of the circle labeled "red liquid" represents 25% red liquid. The just under one-quarter section of the circle labeled "blue liquid" represents 20% blue liquid. The smallest section of the circle labeled "yellow liquid" represents 5% yellow liquid.

Response B: This response is incorrect. The circle is divided into quarters, which represents 25% of each liquid.

Response C: This response is incorrect. The section of the circle for red should be one-fourth of the circle to represent 25%, but it is not.

Response D: This response is incorrect. Circle graphs should not be constructed using parallel lines to create sections.

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Mathematics Sample Test

1 What is the standard form of one hundred twenty-seven thousand, four hundred six?

A 127.46

B 12,746

C 127,406

D 127,416

2 A grocery store ordered 38 cases of soda. Each case holds 12 cans of soda. Which is the best ESTIMATE of the total number of cans of soda the store ordered?

A 200

B 400

C 600

D 800

3 When rounding the number 1,567 to the hundreds place, which digit in the number will be **most** helpful in deciding your answer?

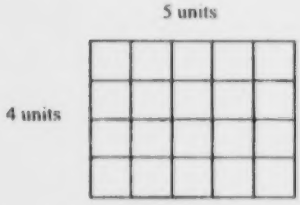
A 1

B 5

C 6

D 7

4 What is the perimeter of the figure below?



A 14 units

B 16 units

C 18 units

D 20 units

5 The six triangles shown below are equilateral and congruent

If the triangles are moved so that one vertex from each triangle is attached to Point *P* and no triangles overlap, what regular polygon could be formed?

A rhombus

B octogon

C pentagon

D hexagon

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Mathematics Sample Test

6 In gym class, Dan jumped a distance of twelve feet, six inches. Kevin jumped ten feet, eight inches. How much farther did Dan jump than Kevin?

A 1'8"

B 1'10"

C 2'8"

D 2'10"

7 Pam chose the number 3 as the first term in a sequence. To get the next two terms after the first she used the rule "add 2, subtract 1." The first 7 terms in her sequence are shown below.

3, 5, 4, 6, 5, 7, 6, __, __

If she continues the pattern using the same rule, which should be the next two terms in Pam's number sequence?

A 7, 8

B 8, 7

C 8, 9

D 9, 10

8 Which is the **largest** whole number that can be used in place of n to make the inequality below true?

$n - 7 < 24$

A 29

B 30

C 31

D 32

9 Patricia plans to buy stuffed animals at the school fair. Each animal costs $3.75. Which number sentence shows the total amount (t) in dollars it should cost Patricia to buy y animals?

A $t = 3.75 \times y$

B $t = 3.75 + y$

C $t = y - 3.75$

D $t = y \div 3.75$

10 Marianna decided to paint two walls in her room. Each wall is 8 feet tall and 12 feet long. What is the total area, in square feet, of the walls that Marianna plans to paint?

A 40 square feet

B 96 square feet

C 136 square feet

D 192 square feet

11 Cliff surveyed his classmates to find the percent of students who chose softball, baseball, football, volleyball, basketball, track, or soccer as their favorite sport. Which would be the **best** way for Cliff to display the data he collected so that it could be **quickly** understood by the class?

A stem-and-leaf plot

B circle graph

C box-and-whisker plot

D double bar graph

12 Connie recorded her height on her birthday for the 6 years shown in the table below.

Height on Birthday

Year	Height (inches)
1993	43.5
1994	47
1995	50
1996	53.25
1997	57.5
1998	60

Between which two consecutive years did Connie's height change the **least**?

A between 1993 and 1994

B between 1995 and 1996

C between 1996 and 1997

D between 1997 and 1998

13 The students in Ms. Thompson's class sold bars of chocolate for a fundraiser. The total number of bars sold by each student on the first day of the sale is shown below.

22, 7, 6, 1, 3, 12, 8, 4, 4, 0, 14, 4, 6

What is the mean of the number of bars sold by the students on the first day of the sale?

A 4

B 6

C 7

D 22

14 Richard donated 9 boxes of instant oatmeal to the school food drive. Each box contained 8 packets of oatmeal. What is the total number of packets of oatmeal Richard donated?

A 17

B 64

C 72

D 81

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Mathematics Sample Test

15 Sharon drew a picture of a square pyramid. What is the product of the number of faces and the number of edges of Sharon's pyramid?

A 40

B 25

C 13

D 10

Write your answer to Question 16 on page 6 of your Answer Booklet. Be sure to answer Parts A, B, and C.

16 The students in Ms. Spicer's class collected data on the number of cookies packaged in newly purchased one pound boxes of Jenny's Bite-Sized sugar cookies. The number of cookies they counted in different boxes of cookies is shown below.

50, 53, 48, 51, 51, 49, 51

A What is the mode of the number of cookies counted in the boxes of cookies? Explain how you got your answer.

B What is the median number of cookies per box? Show your work or explain how you got your answer.

C Find the mean of the number of cookies per box in the 7 boxes studied. Round your answer to the nearer whole number. Show your work or explain how you got your answer.

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Mathematics Test Answer Key

Item Number	Reporting Category	Ability Level	Answer Key
1	C1	A1	C
2	C1	A2	B
3	C1	A3	C
4	C3	A1	C
5	C3	A1	D
6	C3	A2	B
7	C2	A1	B
8	C2	A2	B
9	C2	A3	A
10	C3	A3	D
11	C4	A1	B
12	C4	A2	D
13	C4	A3	C
14	C1	A1	C
15	C3	A3	A
16	C4	A2	CR*

* Indicates a constructed-response item. See the following page for the rubric and sample response.

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Score Point	Description
3	Student gives correct answer to Parts A, B, and C and shows appropriate work.
2	Student gives correct answer to any 2 parts and shows appropriate work. OR Student gives correct answer to all parts but does not show any appropriate work. (Student shows understanding of the problem, but makes minor computational errors.)
1	Student gives correct answer to one part only and shows appropriate work for that part. (Student demonstrates minimal understanding of the problem.)
0	Response is totally inaccurate and/or irrelevant, or there is no response.

Complete and Correct Response for Question 16 (similar to the following):

Part A 51 cookies

Explanation:

The mode is the number(s) in a data set that appear(s) most frequently. The number of cookies that appears most frequently in the data set is 51, which appears three times.

Part B 51 cookies

Work:

The median is the middle number in a data set after the data has been ordered from least to greatest.

First, order the data as follows: 48, 49, 50, 51, 51, 51, 53
Then find the middle number, which is the fourth number in from either end. That number is 51.

Part C 50 cookies (rounded down from 50.43)

Work:

To find the mean, divide the sum of the data by the number of pieces of data.
First find the sum. $50 + 53 + 48 + 51 + 51 + 49 + 51 = 353$
Then, divide the sum by the number of pieces of data (which is 7): $353 \div 7 = 50.43$ which rounds down to 50.

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